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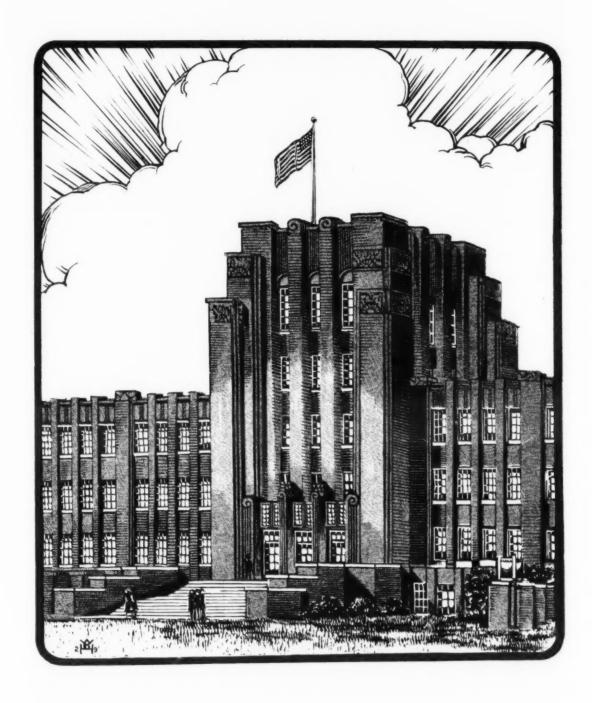
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# THE AMERICAN

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July, 1929

THE BRUCE PUBLISHING COMPANY CHICAGO MILWAUKEE, WIS. NEW YORK

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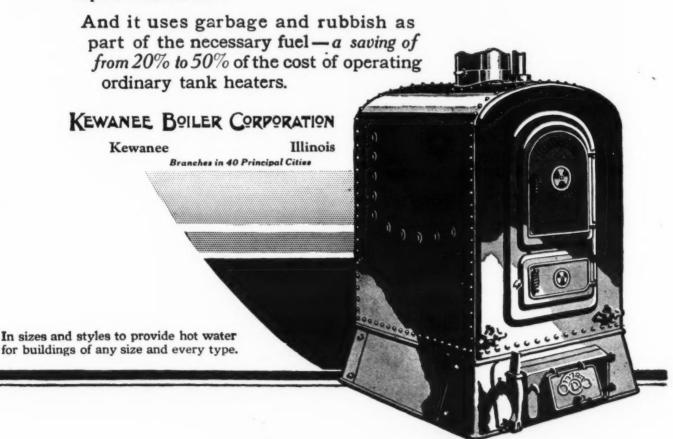
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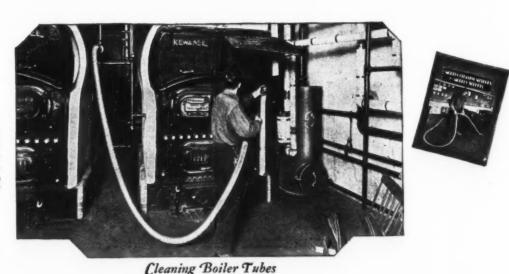
It saves in the boiler room—by cleaning the boiler tubes and floor - often the resulting economy pays the operating expenses of the system.

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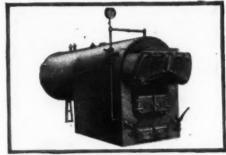
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THE architects who designed this wonderful group not only considered appearance from the standpoint of artistic endeavor but also knew that this must be combined with a never-failing source of heat—thus Titusville Boilers were chosen for this most important task. Their reputation for design, material and workmanship is such that they were preferred above others.

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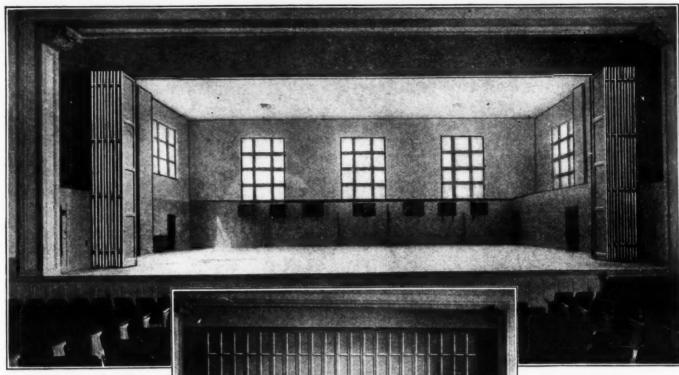
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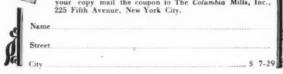
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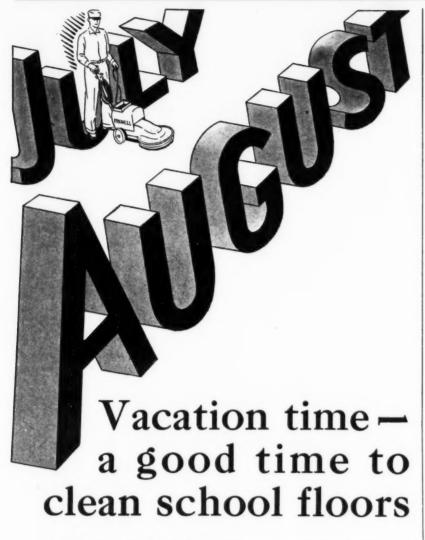
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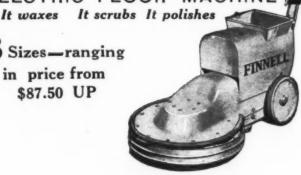
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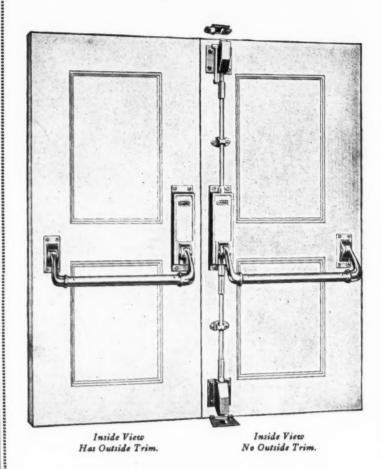
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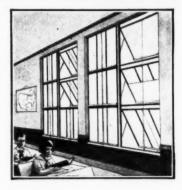
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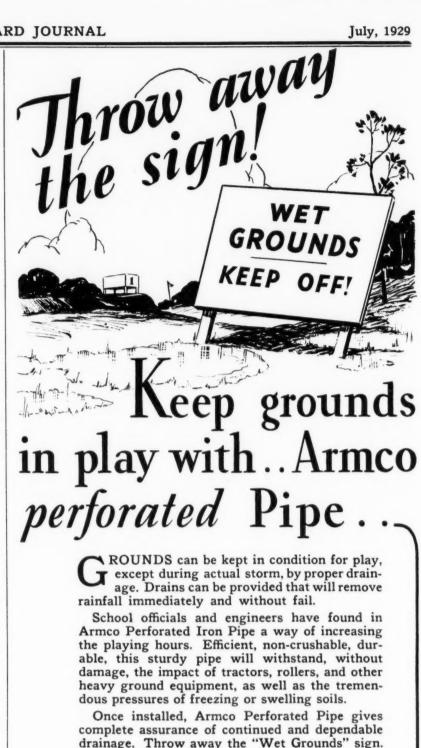
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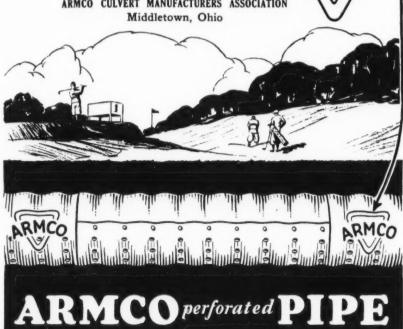


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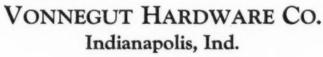
The equipment of old school buildings with Von Duprin latches is as vitally important for the safety of the inmates as is the equipment of new buildings.

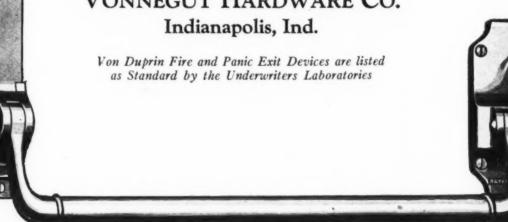
Some architects have become accustomed to making panic bolts a part of the finishing hardware specifications. This is perfectly natural, since panic bolts are placed in such close proximity to the finishing hardware.

Yet it has become the source of considerable trouble to school men, as well as to the architects, since an occasional unscrupulous dealer accepts such a specification as an opportunity to substitute cheaper devices as part of the finishing hardware contract, which is far more difficult when panic bolts are made a separate item of the specifications.

In order to prevent substitution and to give the school boards what they want, we have for many years made it possible for every reputable hardware dealer to get Von Duprin devices at the same prices.

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Christian College, Columbia, Mo., writes, "Some time ago you presented the merits of Sonotint flat wall finish and Cemcoat Floor Enamel. Because we had not used these materials we were skeptical. The fact we are now placing another order for an additional quantity of each proves we are well satisfied with your products."

> Cemcoat and Sonotint are only two of the seven long-lasting school preservative products described below, used by thousands of schools.

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LAPIDOLITH — This liquid chemical concrete hardener welds the loose particles into a close-grained mass that becomes granite hard. Excellent for basement or any floor receiving hardest wear. The flint-like topping withstands years of traffic. Water or chemicals do not readily penetrate it. Merely mopping and sweeping keeps a Lapidolized concrete floor sanitary. Goes on like water so labor cost is negligible. Equally efficient for old or gible. Equally efficient for old or new floors. Colorless.

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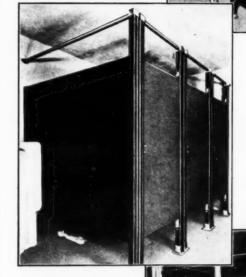
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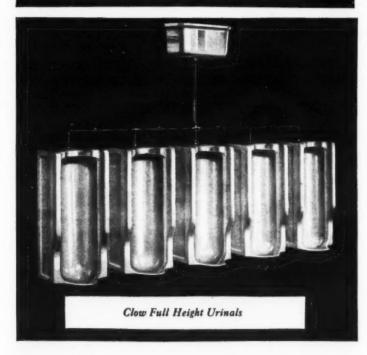
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Specializing in Educational Buildings

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EDWARD J. WOOD & SON
Architects

Specialists in School Design
We also furnish Consulting Service to School Boards
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ACKNOWLEDGED THE STRONGEST BUILT LINE ON THE MARKET

### EXCEL IN STRENGTH AND ECONOMY



### **FOLDING CHAIR No. 85**

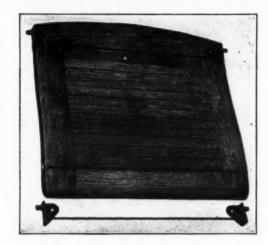
Extra wide curved back, with steel rods extending across outside of top and bottom back rails. Lower front dowel is also re-enforced with continuous steel rod. Seat lifts independent of short legs. Note extra heavy stretchers or supports in lower part of chair. An ideal style to strip in sections of two or three chairs. This chair is more "roomy" than the average folding chair, therefore it affords added comfort. Material of maple in natural or walnut finish. Carried in stock in natural finish. Weight about twelve pounds. twelve pounds.



PORTABLE CHAIR No. 251

The "Rock of Gibraltar" of the portable chair industry. Heavy framed curved back and seat of hard maple, All slats flush with frame, Double dowel construction used throughout entire chair. The chair of the century. Carried in stock in walnut finish. Weight about seventeen pounds each.

There's a Difference in Portable Chairs . . . here is ONE outstanding Mahoney Feature



The Re-enforced Seat as used on all slat seat portable chairs absolutely insures against pulling apart at the joints and adds 100% to the life of chairs. Seat pivots on a solid steel pin acting on a brass bushing set in the standard. This assures a freeacting, noiseless hinge.

> Furnished in Mahoney Chairs exclusively



Mahoney Assembly Chairs solve the seating problem wherever portability is desirable. Attractive and graceful, they are at the same time staunch and rugged. Their curved backs and correct posture seats make them comfortable - an important feature in schools where attentiveness is such a vital factor. Available in sections of two, three or four and in a wide variety of styles.

Write for Complete Catalog No. 16



### FOLDING CHAIR No. 129

A real flat folder that is actually comfortable, because top back support is curved. The most rugged chair on the market. Made of full thickness maple stock, finished natural or walnut, Carried in stock in natural finish. Weight about one hundred pounds per dozen.



PORTABLE CHAIR No. 255

The outstanding value of our entire line. Back is curved with 5-ply veneer "housed" on four sides. The seat is curved with flush slats. Material of hard maple. Carried in stock in walnut finish. Weight about sixteen pounds each.

### THE MAHONEY CHAIR CO.

Central and Western Sales Office

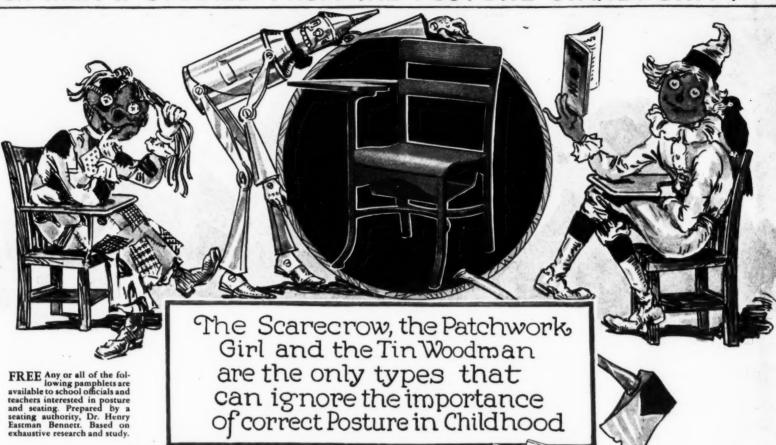
230 East Ohio Street, Chicago

Factory and General Offices-Gardner, Mass.

Showrooms-New York City, Boston, and Hartford, Conn.

CENTURY. MAKERS OF PORTABLE CHAIRS FOR ALMOST

### SCHOOLS REFLECT DISCREDIT WOULD THE SEATING IN YOUR FROM THE POSTURE STANDPOINT? ON THEM IF STUDIED



- 3-School Seats Too High. 4-Why Tables and Chairs in the Class-
- room.
  5—Uses and Limitations of Movable School Seating.
  6—The Buying of School Equipment.
  7—A Study in School Posture and Seating.
  8—Hygiene of the Seat Back.

- 9-School Posture in Relation to Visceral Organs.

  10-Scoliosis and School Seating A Study in Arm Rests.

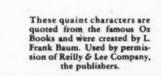
  11-Left Handedness.

  12-For the Comfort of the Crippled Child.

  13-The Height of Kindergarten Chairs.

  14-Grade Distribution of School Desk

- Sizes.
  15-Tablet Arm Chairs-Their Use and





### Health Preservation Activities Focus Attention on Seating

PARENTS are seeking the facts about posture and what it means to the growing child. Good posture habit is essential to physical vigor. Correct posture habit is encouraged by correct seating. School officials are vitally concerned in this, too. They are demanding comfortable, correct seating-the hygienic construction which is always found in "American" products. Postur-ally, every "American" seat is backed by nationally accepted authority. Size and proportion is the result of research and studies of child anatomy and seating habit in the schoolroom. Into every seat has been built the health protection to which every child is entitled.



American Seating

1030 LYTTON BLDG. . CHICAGO

Branches in All Principal Cities

American products are distributed nationally by accredited warehousing distributors on a One-Price Policy.

# Simplifies



# Teaching

THE Educator Model of the White Rotary Electric has been carefully planned FOR SCHOOLS. It is the only machine designed especially for school use . . . So simple to operate that sewing instructors find teaching greatly lightened—and pupils learn more easily.

Among the many splendid features of the Educator Model are stitch and tension regulators with numbered dials; spool pins which revolve and keep the spool from jumping off; simplified threading; rotary motion, eliminating vibration; the White Sewing Lighteach one a necessity to efficient operation.

A feature that is exclusive with the Educator Model alone is the adjustability of both the machine and chair. A wide knee lever lets the pupil sit close to the

machine, or away from it, as comfort dictates. The front is left open, and a convenient drawer is provided to give ample storage space.

When classes are over a collapsible cover supplied with the machine completely protects the sewing mechanism from dust.



If your school is already equipped with one or more White Sewing Machines {anymodel} you are entitled to these valuable wall chart teaching aids. Write for them. Give serial number of each machine in your school.

White Serving Machine Company CLEVELAND, OHIO, U. S. A. THE

Manufacturers of Sewing Machines for 53 Years

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The Henderson Eclipse Movable Desk Model No. 660

Now made exclusively by The Theodor Kundtz Company from Patents by Henderson.

\$10.00 each



Adjustable Pedestal Desk Model No. 802

The most practical of all fixed types of school desks. Special features of adjustability and sanitation.

Large Size—Open Box \$10.20 each f. o. b. Cleveland



Adjustable Steel Desk and Chair

Model No. 405

Simplified adjustment. Chair equipped with new device which permits it to revolve for black board recitation.

Large Size—Open Box \$8.65 each f. o. b. Cleveland

# Send in

Kundtz can give you immediate delivery on any of these new models. Don't risk annoyance and disappointment caused by late orders. Place your order now!



The Movable Adjustaplex Model No. 640

Grace of line, ease of adjustment are outstanding features here. Built to give years of satisfactory service.

Large Size—Lift Lid

\$12.00 each



Single Pedestal Stationary Model No. 851

This type desk now being used in most of the larger cities in Junior and Senior High Schools. Especially sturdy to resist hard week.

Large Size—Open Box \$9.25 each f. o. b. Cleveland



Tablet Arm Chair Model No. 704

The latest design in tablet arm chairs. Movable, adjustable, rigidly constructed.

\$6.20 each 1. o b. Cleveland

The Theodor Kundtz Company
CHURCH AND ECLIPSE AUDITORIUM SEATING

SCHOOL FURNITURE

KUNDTZ LEADS WAY THE

# GUNN

LIBRARY FURNITURE, MECHANICAL & ART DRAWING TABLES, TEACHERS' DESKS, CAFETERIA TABLES

Made in Grand Rapids

"The Furniture Capital of the World"

GUNN Furniture is made by experienced craftsmen who have made furniture building their life's vocation. This insures highest quality of construction, cabinet work and finish.



— GUNN SELF-ADJUSTING TOP —
A Special Convenient Feature

Our Patented Self-adjusting Device permits adjustment of top at any angle by simply raising top to height desired. When top is raised to vertical position the adjustment ratchet is automatically released and top returns to flat position.



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THE GUNN FURNITURE CO.
Grand Rapids, Michigan

Thirty Years Builders of Office Desks and Tables

# For OFFICE LIBRARY CLASSROOM CAFETERIAS DOMESTIC SCIENCE

# SAMSON

SCHOOL TABLES

Years after the purchase is when the high quality of Samson School Tables is most apparent. Thirty-three years' experience have taught us how to build tables combining grace and beauty with the most important factor — ENDURANCE.

Check the 14 outstanding construction features described in our catalog. Insist that they be included in the specifications when you next buy tables for classroom, office, or library use.



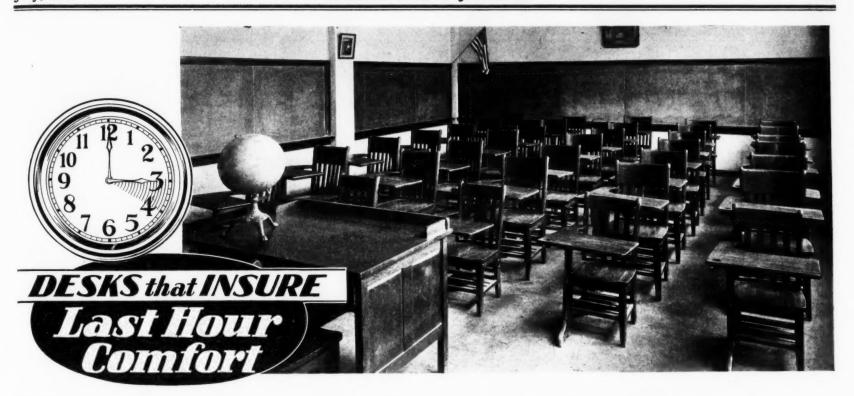
### PORCE-NAMEL

Samson and PORCE-NAMEL Domestic Science Tables, cabinets and bases feature durable materials with heavy hard maple or Laflat porcelain tops and efficient methods of construction, assuring you of equipment to satisfy the most exacting requirements. The arrangement of drawers, cupboards, boards, seats, etc., is in accord with specifications for utmost efficiency and convenience. The waterproof tops are especially prepared for domestic science use.

Send for the catalogs of Mutschler School Furniture.

### Mutschler Brothers Co.

BETTER TABLE BUILDERS Gince 1896 Nappanee, Indiana



## Here, Students Sit Squarely In Their Seats

Uncomfortable positions tire pupils more than do the hours of school work. When they must turn in their seats to rest their arms while writing and to get proper light, they have no back support—they do not relax—tightened muscles soon tire. Before the last period classes arrive the pupils are restless, tired, uncomfortable and irritable. They worry the teacher and pay less attention to last hour classes.

The school room pictured above is equipped with National Chair Desks with Moeser Extended Arm. In this room a pupil has proper light, proper support for the arm and back. Last hour strain is avoided by pupils and nervous strain is avoided by the teacher.

## "NATIONAL" Seats of Comfort

### MOESER EXTENDED

eliminate facing the light and uncomfortable positions while writing. The pupil sits squarely in the seat. The back is supported when writing—working space is doubled—no turning to rest arm while writing—the arm is supported, resulting in better penmanship. National Desks are shaped to conform hygienically to the human figure—they encourage correct posture—insure greatest comfort—less fatigue—less eye strain—better grades in last period classes and less worry and nervous strain on the instructor.

### Use This 10 Point System When Choosing School Desks

- 1. Health
- 2. Comfort
- 3. Convenience
- 4. Strength 5. Durability
- 6. Compactness
  - 7. Lasting Finish
- 8. Harmonious Design
- 9. Simplicity
- 10. Sanitation

Years of collaborating with America's leading educators, together with our own exhaustive research and experiments, have resulted in equipment noticeably superior from the viewpoint of these 10 Major Tests for All School Seating.

### Write for the New National School Equipment Book

If you are a buyer of School Equipment you will want our latest catalog on School ks. All types of school chairs and teachers' and office desks. We will send our catalog free and prepaid on request.

### THE NATIONAL SCHOOL EQUIPMENT CO.

Manufacturers of Complete School Equipment PORT WASHINGTON, WIS.



New National Chair-Desk. Equipped with the Moeser Extended Arm.



This Book FREE





### CHAIRS - DESKS - FOLDING CHAIRS - COMBINATION DESKS - ADJUSTABLE DESKS - THEATER CHAIRS

### A COMPLETE LINE

### Unexcelled in Design and Honestly Built

Right — Theater Chair No. 600A. is the Ideal seating equipment for school auditoriums.

Below — The most popular folding chair made is the famous Peabody No. 70.





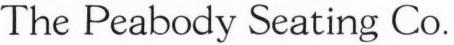


Left—The "Panama" combination desk with noiseless hinge and the new Double Lip and Undercut method of joining wood and iron.

Below—Peabody Portable Assembly Chair Sections are built together — not simply individual chairs fastened to long section strips.

Twenty-six years of square dealing with American Schools has firmly established the Peabody reputation for quality of product and quality of service. We offer you without cost, the service of our seating experts in the solution of *your* problems.

Send for the latest Peabody Catalog.



Formerly the Peabody School Furniture Co.

North Manchester



Indiana

TABLET ARM CHAIRS - RECITATION SEATS - MOVABLE CHAIR DESKS - TEACHERS' DESKS - ASSEMBLY CHAIRS

### COMFORT

Is one of the essential characteristics of the VIKING Steel Folding Chairs. In designing the VIKINGS the importance of comfort in a folding chair was given primary consideration; it has been built into these chairs. Their properly designed seats and backs assure perfect comfort.

### CONSIDER THESE VIKING FEATURES



STURDINESS
RIGIDITY
INDESTRUCTIBILITY
ECONOMY
COMFORT

ATTRACTIVENESS
COMPACTNESS
BALANCE
QUIETNESS
LOW PRICE



MAPLE CITY STAMPING COMPANY

PEORIA, ILLINOIS

VIKING NO. 1000

# Progress

AIMING for an ideal:—not chain ed down to a price.—"Royal" Movable Desks bespeak progress because they embody every conceivable school need of today,—and perhaps tomorrow, too.



R O Y A L M E T A L
Manufacturing Company
1130 So. Michigan Boulevard
CHICAGO

# our grades

. . . from Plain Oak to the high grade Quartered Oak, Mahogany and Walnut.

> but each desk moderate in price

# IMPERIAL **DESKS**



Three factors enter into the cost of school furniture: 1—Original Cost; 2—Length of Life; and 3—Cost of Maintenance.

Imperial Desks are all moderately priced. Whether you select plain oak, mahogany or walnut you may be certain that you are paying a fair figure based upon quality of workmanship and materials.

Imperial Desks are sturdily built to withstand severe school use. The experience of many years has taught us that sound structural details and careful designing is the foundation of furniture life. Imperial Desks are therefore long lived.

The petty annoyances of wobbly legs, creaky joints and sticking drawers tend to increase the cost of any school installation. They mean frequent attention, which, though seemingly trivial, means real expense when extended over a period of years. The ability of Imperial Desks to stand up through long years of battering and abuse without attention is one of the principal reasons for their popularity.

This trademark assures good quality and correct design



Look for it on all of your desks and tables

A catalog of the complete Imperial Line of Teachers' Desks, Classroom and Library Tables, Office Desks and all types of chairs will be sent through our nearest dealer on request.

IMPERIAL DESK COMPANY **EVANSVILLE** INDIANA





### As Tough as a Yegg!

Here's an all wood folding chair that will stand abuse, and the roughest of service. It may be knocked around and it won't care. It's as strong as an ox, and so well constructed that it won't rattle, won't warp, and can't rust. It's easy to open—easy to close—easy to stack—EASE-y to sit in. The ideal school and assembly chair. Stacks as easy as pan



These wooden chairs are nailed and glued. They are so constructed that there are no metal stampings to get loose or come off; there are no nails on the seat; "no metal to touch you"—to catch the dress or pinch the seat or fingers.

These chairs come in natural finish (beech) and also in colors-vivid red, blue, green, orange; and black or walnut on special orders. Made singly and in sections. Ideal for schools and all assemblies, both inside or outside.



### May Be Left Out in the Rain

And among the other factors of the TUCKER'WAY, remember they won't warp, (they can't rust), and won't turn white when left out in the rain. They are built of beech—uniform in color—dipped in water-proof varnish. That's another reason why Cheutengues and others son why Chautauquas and others like them so well. THE OUT-DOOR Folding Chairs.

### Juvenile Sizes, too!

In addition to the regular sizes, the TUCKER'WAY is made in junior sizes for the tiny tots. Fine for kindergartens. Exactly like the larger chairs but in a smaller size.

These chairs also come in colors the same as the regular size or in the natural (beech) finish.

### Send for Sample Chairs

Let us send samples of both sizes in any colors you desire for your inspection. Knock these chairs around to prove for yourself that they are as tough as a yegg. Open and close it with your foot — note how easy and quickly you may do so. Sit in them and notice their comfort; stand on them and notice their strength, and that they won't tilt. Use the coupon or write for samples and quantity prices.

### TUCKER Duck & Rubber Co.

Fort Smith, Arkansas





What have you a right to expect in schoolseating? That is a fair question and one we like to answer. Next to proper food and regular hours for growing school children there is nothing so important in safeguarding the health of boys and girls as correct seating. School seats should place the student in a correct, healthful posture. The sagging, broken down seat, or one which makes "slouching" and "sprawling" easy is detrimental to health. Authorities agree that anatomically correct seating is very necessary to good health. Students do better work when seated properly:—they are more wide awake and far more efficient scholars. Steel Furniture Company has always paid particular attention to correct posture principles in seat designs. Every Steel desk and chair is scientifically planned to seat the student in a correct, healthful posture. Steel seats discourage "slouching" and "sprawling," and encourage the student to sit correctly and most comfortably.

Steel seats are strongly built. The finest steel and woods, plus famous Grand Rapids Craftsmanship, plus volume production make them the best value in school-seating. Get the complete facts. Write today.



STEEL FURNITURE CO.
GRAND RAPIDS, MICHIGAN





### Slate and Duro-Cork

### Make Permanent Display Boards and Blackboards

"Permanence and economy"—this is the standard by which the modern school is built. For permanence MEANS economy-in the long run durable materials cost less.

Pennsylvania Slate Blackboards and Duro-Cork Display Boards will last as long as the school itself. They need no replacement, repair, renewal or attention of any sort. For your next school, try

### Buy It All from a Single Source

Here is a close, compact, self-contained organization that quarries, works, finishes and sells its own product. Your slate and Duro-Cork will come to the job, cut to sizes required, ready for setting, without extra charge. Consult us!

### Pennsylvania Structural Slate Company First National Bank Bldg. Easton, Penna.



Clip and Mail Coupon —

PENNSYLVANIA STRUCTURAL SLATE CO., Easton, Pa. (check square for information desired) ☐ Please quote on..........square feet of Pennsylvania Structural Slate Blackboards, delivered to address below. ☐ Please quote on......square feet of Duro-Cork, delivered to address below. Please send specifications and setting instructions for Blackboards and Bulletin Boards. ☐ Plans are being forwarded for quotation on.....job. Name..... Address.....City and State..... Please send Catalog B on other Slate products.



### Modern Schools have Adopted this Inkwell

Air-Tight — Non-Evaporating — Dust-Proof

Here is the new, improved, all-hard-rubber Sengbusch Self-Closing Inkstand. No breakage, saves books and clothes. No school can afford to do without them.

### SAVES 75% OF YOUR PRESENT ANNUAL INK BILL

Adopted as standard by the business world. Millions in use giving satisfactory service. Simple to install, no special tools required. Further information will gladly be sent to you on request.

### Sengbusch

Self-Closing Inkstand Company 418 Sengbusch Building, Milwaukee, Wis.



### A Timely Message To Educators

IS interesting to note in this age of progress that no basic improvement has been made in the seating arrangements of our primary grades since the designing of the stastrides have been made in practically every branch of education but in this one respect it has stood still. For years school superintendents

and educational authorities have realized the need of a change in the lower grades. It remained for the RINE-HIMERS, master woodworkers, to evolve the much-need-ed improvement. The ELGIN SCHOOL TABLE for first and second grades—the co-operative efforts of experi-enced educational directors and constructive engineers— is now fast replacing the im-practical, uncomfortable sta-tionary desk. It is the basis for the new principle of "group instruction."

### SEND FOR THIS BOOKLET NOW

These betterments can be better appreciated after reading our booklet "Seating Efficiency." Send for it now. You can then make the necessary changes in your rooms during vacation time.

### RINEHIMER BROS. MFG Co.

DEPT. OF SCHOOL FURNITURE

ELGIN, ILL.

# TELL CITY CHAIRS For Every School Room Requirement



KINDERGARTEN CHAIR Quartered Oak Full-Box Saddle Seat. Can be had in 10-12-14-16-in. Heights.

Tell City Chairs are the product of a factory that has for years specialized in chairs for the school.

They are built for correct posture, designed to increase class room efficiency, and their long years of service make them most economical.



No. 476

LIBRARY CHAIR

Quartered White Oak FullBox Seat with four corner
blocks. Can be had in
Junior and Senior size.

You can secure Tell City Chairs equipped with the famous Wittliff braces, an added advantage that means reduced maintenance costs for your school board. We have contracted for **exclusive** use of the famous Wittliff furniture brace for Tell City School Chairs.





Bottom view of chair, showing position of Wittliff brace. Angle-headed bolts run through each leg, firmly bracing the entire chair. Angle-headed bolts are flush with posts.

Tell City Chairs are carried in stock by jobbers throughout the country for immediate shipment. We solicit inquiries and will mail complete catalog on request.



No. 1634

### **Tablet Arm Chair**

Tell City Tablet Arm-Chair, No. 1634, is all quartered oak, full box saddle seat, quartered oak or maple tablet arm. Lower back slat is shaped, and this chair has been designed to give correct posture and comfort for the student.

No. 1633 Chair to match without tablet arm or book rack.

TELL CITY CHAIR CO. TELL CITY, INDIANA

# New Designs of INDESTRUCTO



THE DUTCHESS AUDITORIUM CHAIR

Beautiful, dignified, comfortable. The same through and through. Center standards the same as aisle standards. Standards of pressed steel with noiseless double ball and socket hinge, finished olive green unless otherwise ordered. Seat and back of 5 ply 76 maple of the proper curves, finished dark mahogany unless otherwise ordered. Each \$3.50, with 34-inch back \$3.75.



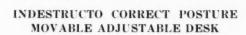
COLUMBIA INDESTRUCTO KINDERGARTEN CHAIR

Sturdily constructed with a saddled oak seat and curved quartered oak back and a solid steel frame. Made in three sizes. One dozen weigh 110 lbs. and are priced at \$16.00. Also the Elementary Tablet Arm Chair at \$21.00 per doz.

### STRUCTOFOLD CHAIRS

Guaranteed to endure hard usage. Our special circular gives a choice of many designs. Any chair may be had with plywood seat as in APW and HPS; with steel scroll seat as in BOS or with a steel flat seat. In some numbers a choice of plywood or steel back is given. Rubber shoes for tubular patterns @ 15c per chair: Any patterns may be fastened in racks or rows as shown @ \$3.00 per dozen. Prices per dozen: HPS

Prices per dozen: HPS \$25.00; FPW \$22.50; BOS and APW \$20.00.



The back and seat are curved to fit the body and support the pupil in the correct posture as ascertained by the Correct Posture League and other authorities. A great advance in School Seats, seat top and back are of maple plywood finished in schoolroom brown. Steel frames in olive green unless otherwise ordered. Price including inkwell Nos. 1 and 2—\$5.25; Nos. 3 and 4—\$4.95; Nos. 5 and 6—\$4.65. Drawers, all sizes, 95 cents.



No. 65 STEEL BOOK CASE WITH DOORS

Impervious to rats, mice or other vermin as well as fireproof. It will keep your libraries in good condition during vacation months as well as during the school term. The shelves are of wood, for better surface for the books, and are adjustable.

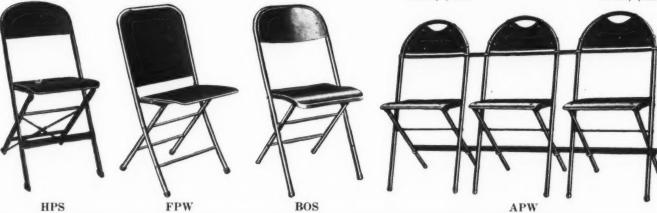
Dimensions: 12 in. deep by 40 in. wide by 55 in. high, each \$30.00.



STUDENT TABLE WITH CORRECT POSTURE CHAIR



Chair, \$2.85



**COLUMBIA** 

**SCHOOL** 

**SUPPLY** 

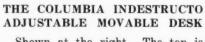
# SANI-STEEL School Furniture



STANDARD INDESTRUCTO ADJUSTABE MOVABLE DESK

Seat of standard scroll either plywood or solid. Top of standard rectangular pattern with flush top inkwell. Top is adjustable in height, in tilt, and has an adjustable leveling device. Wood parts are of hard maple, schoolroom brown finish. Plywood top.

No. 370-1 and 2 @ \$5.25; No. 373 and 4 @ \$4.95; No. 375 and 6 @ \$4.65.

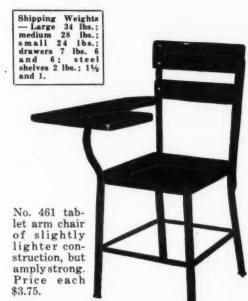


Shown at the right. The top is adjustable in height, in tilt, and has a leveling adjustment not possessed by any other desk.

Wood parts are of oak, finished in schoolroom brown, while the steel frames are finished olive green.

No. 400-1 and 2, \$4.95; No. 403 and 404, \$4.65; No. 405 and 6, \$4.35; B Drawer, \$0.95. Inkwells with steel swinging holders, \$0.15. Back panel above bookshelf, \$0.20.







May be used for Teachers, Visitors, Cafeteria, or the Library. Oak seat and quartered oak back are finished dark golden or brown. Has an olive brown steel frame. Priced at \$2.85 each.



COLUMBIA INDESTRUCTO TABLET ARM CHAIR No. 420

Above is an illustration of the Columbia Indestructo Tablet Arm Chair. Back slats are of quartered oak, while the seat and arm are of plain oak or maple. Price of each \$4.25; with perforated shelf \$.25 extra.





SANI-STEEL INSTRUCTOR'S DESK

This desk may be had with two drawers at \$13.00; four drawers at \$17.00; with five drawers at \$19.50. It has a steel frame and body that is finished dark olive green. The top and drawers of five-ply built up quartered oak, finished dark golden.

COMPANY · · · INDIANAPOLIS

## No. 44



No. 44 Swinging Slat Back

Many features developed throughout our years of experience as Folding Chair manufacturers have been incorporated in this model. It folds perfectly flat, is nontipping and will stand up nobly under severe use.

### STANDARD

AS shown in the illustration to the left, the No. 44 Standard Folding Chair folds perfectly flat. Thus quite a number of chairs can be stacked where previously there were only a few. The resultant economy of space makes it advisable to buy chairs that stack flat.

However, if you desire a chair of finer appearance there is the No. 90 Folding Chair. These chairs can be used any place at any occasion and will enhance the appearance of the room wherever they are used. Although this model does not fold flat it stacks very compactly.

Besides these two there are twelve other distinctive styles of Standard Folding Chairs each answering its purpose nobly whatever the need it is put to.

We are anxious to send fully illustrated literature. Please write.

### STANDARD MFG. CO.

Cambridge City,

Indiana, U.S.A.

# No. 90



No. 90 5-Ply Veneer

The folding chair shown above is the pride of the Standard Line. It is very comfortable, strong, neat in appearance and folds compact. The most critical buyer will find that the construction meets his strictest requirements.

### MANUAL TRAINING BENCH No. 280



A GLANCE AT THIS NEW PATTERN will show that the combination of various sized drawers and cupboard makes an unusually practical bench. Notice, especially, the small drawer which is intended to hold nails, screws, small tools, etc., which so easily become misplaced when kept with the larger tools. Being able to immediately lay hands on these small but necessary items, will be the means of saving a great deal of time, thereby promoting efficiency. Also, notice the large cupboard, which will hold such tools and materials which cannot be kept in the general or three private drawers. Bench is equipped with our Abernathy Rapid Acting Roller Nut Vise No. 70D on front, adjustable stop and dog.

### C. CHRISTIANSEN

Manufacturer of this line since 1898

2814-2842 West 26th St.,

Chicago, Ill.

### SQUIRES INKWELLS

We manufacture the Boston Inkwell in three different styles. All have hard rubber tops and the glasses fit either style of top. These fit  $1\ 27/32$  inch holes.

SQUIRES No. 58 BOSTON INKWELL



SQUIRES No. 60 BOSTON INKWELL



SQUIRES No. 12 COMMON SENSE INKWELL

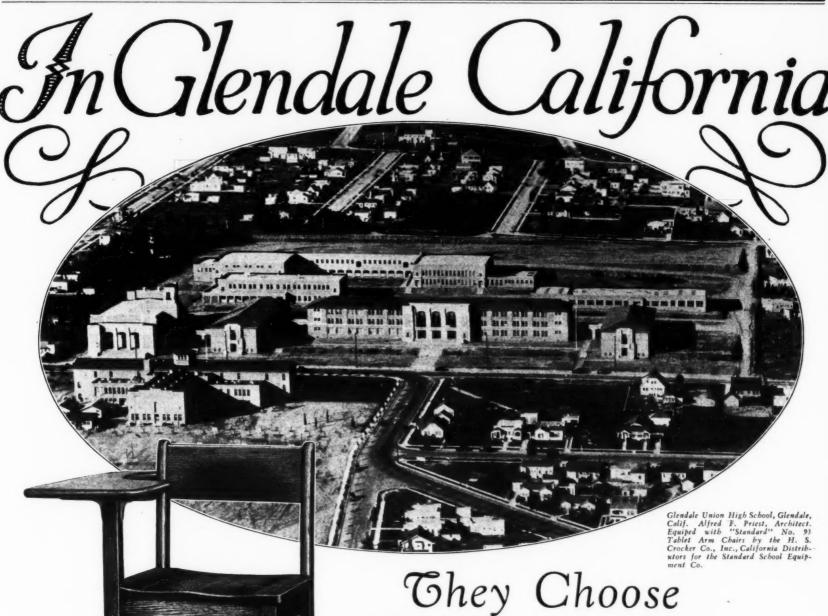


Our No. 12 or Common Sense Inkwell is made in three sizes, to fit holes  $1\frac{1}{2}$ ",  $1\frac{3}{4}$ " or  $1\frac{7}{8}$ ". Corks with Caps or Rubber Corks furnished at same price.

We make several other styles of inkwells.

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Brady Bldg., Third Ave. and Ross St., PITTSBURGH, PA.

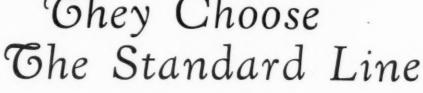


The No. 93 Posture Tablet Arm Chair is the result of five years' development. Its shallow seat prevents cutting off the circulation just above the knees, its wide back slat is placed so as to support the back where support is needed, and the seat so shaped that the occupant must sit well back and not on the edge. Back and tablet arm are so shaped that arms and shoulders are free and unimpeded. Full boxed seat, double spiral dowel construction throughout. Finish: Standard Brown, lacquered.

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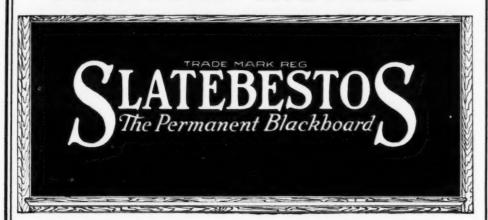
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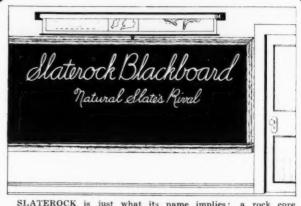
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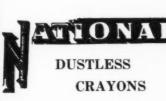


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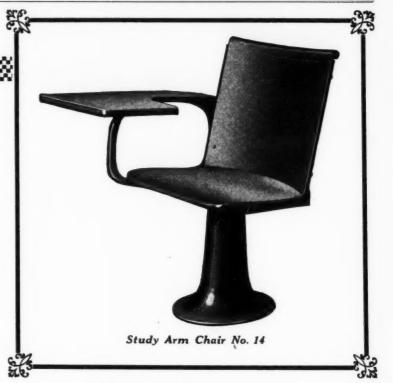
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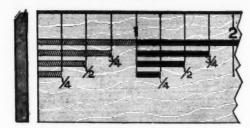
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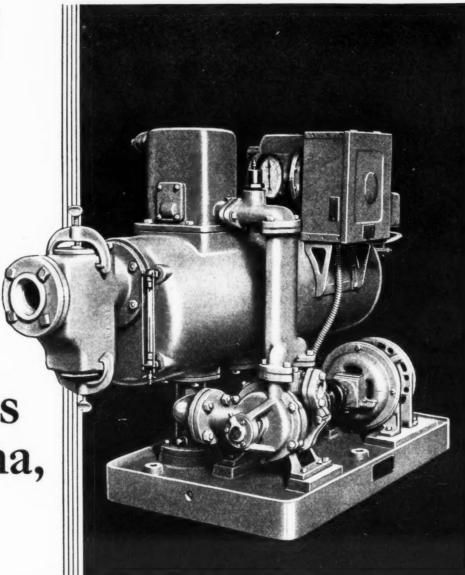
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VOL. 79 No. 1

Eastern Office

342 MADISON AVENUE NEW YORK, N. Y.

# THE AMERICAN

JULY 1929

A Periodical of School Administration

Published on the first day of the month by

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## Question of Publisher's Practice

The average reader of a magazine necessarily assumes that every high-class publication is guided by certain fixed standards and practices as applied to the publishing business. He may not know, however, that there are established agencies which fix these standards, and which separate the worthy from the unworthy publications. Such an agency is the institution known as the Associated Business Papers, universally recognized in the publishing world.

It may, therefore, be entirely in place to mention here that the Bruce publications are recognized by the Associated Business Papers as complying with the highest standards and practices in the publishing field. All of which means:

To consider first the interests of the subscriber. To hold to and work for truth and honesty. To solicit subscriptions and advertising solely upon the merits of the publication. To make honest circulation statements, and to decline misleading advertisements. To avoid unfair competition.

Finally, it means that the publisher must determine what is the highest and largest objective of the field which he serves, and must strive in every legitimate way to work toward that end.

The AMERICAN SCHOOL BOARD JOUR-NAL since its birth has consistently and persistently lived up to the finer conceptions and ideals of service and helpfulness in the field which it seeks to cover. This claim is attested in the fact that subscribers and advertisers alike have for a period of forty years expressed their confidence and extended their recognition. The real compensation which comes to us, after all, is found in the consciousness that the task has been well performed, namely, that a real and lasting service in the cause of popular education has been achieved.

FRANK BRUCE, Publisher.

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Discontinuance—Notice of discontinuance of subscriptions must reach the Publication Office in Milwaukee, at least fifteen days before date of expiration. Notice of changes of address should invariably include the old as well as the new address. Complaints of nonreceipt of subscribers' copies cannot be honored unless made within fifteen days after date of issue.

Editorial Material—Manuscripts and photographs bearing on school administration, superintendence, school architecture, and related topics are solicited, and will be pai upon publication. Contributions should be mailed to Milwaukee direct, and should be accompanied by stamps for return, if unavailable. Open letters to the editor must in all contain the name and address of the writer, not necessarily for publication, but as evidence of good faith.

The contents of this issue are listed in the Education Index and Current Magazine Contents.



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In the Schools of

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"STANDARD MAKES EVERY MINUTE COUNT"

# THE AMERICAN School Bourd Journal

Founded March, 1891, by WILLIAM GEORGE BRUCE

Volume 79, No. 1

JULY, 1929

Subscription, \$3 the Year



REGISTERING A RECENT ADDITION TO THE FACULTY

## Teachers are Funny!

Muriel Stafford, Wethersfield, Conn.

Francis' yellow head gleamed gaily above the red sweater that belonged to the little girl in the back seat. The teacher had taken off his rain-soaked blouse, and borrowed the sweater for him. He looked at his blouse drying on the radiator, and felt very important. From the radiator his gaze drifted out of the window. It had stopped raining. He could see the grass, all sparkly green, and the leaves that were floating down upon it like little multi-colored fairy boats. Perhaps each one had a fairy steering it!

"Francis! You're the only little boy in your row who isn't ready for Miss Lane. Put your paper away quickly, dear."

He looked at his desk. His paper wasn't done at all. She'd notice that, pretty soon, and be sad or cross. It was hard to remember everything, all the time—to finish silly papers by writing the same thing over and over; not to say anything even though you knew the answer, unless it was your turn; and not to look out of the window when you should be working. Teacher was nice, though, and she smiled if you remembered. He put his things away and sat rigid with his hands clenched in the most approved manner.

Miss Lane came in briskly. She was the new singing teacher, and so pretty! Francis smiled at her approvingly, but she didn't seem to notice today. She was biting her lip and frowning a little.

"I hope you are all lovely tall children this morning," she said "Dominick has a fine straight back! Let's listen for a minute and perhaps we can hear the clock tick."

Francis was much more interested in the jingling bracelets on Miss Lane's arm than in the clock. Teacher came across the room and he heard Miss Lane whisper:

"The Boss is around, and he's on the warpath. He hasn't observed me yet, either. I'm a nervous wreck!"

Francis thrilled with a touch of apprehension. So Miss Lane knew the Boss, too! His father talked about him lots of times, but he never said anything about the Boss being an Indian. No wonder Miss Lane was scared! Indians painted their faces and carried hatchets when they went on the warpath. He'd seen them in the movies.

He watched, absently, while the rest of the class sang up the scale and down the scale. Miss Lane's mouth opened very wide and round when she sang. He wondered if you could see away down to her toes if you were near enough. He leaned forward on his elbow to find out, but just then Miss Lane noticed him.

"Why, Francis! I haven't heard your voice at all this morning. You sang beautifully last week. Stand up and sing for me."

Francis stood and knit his brow anxiously.

"What'll I sing?" he asked.

"Oh, something you learned last year in the First Grade. Any song at all."

Last year was such a long and hazy time ago. He struggled to think of a song.

"Quickly, Francis! We're waiting."
If he could only think! Ah! He brightened.

"I know a song about an old man. Will that be all right?" he asked.

"Yes. Yes. Anything."

He straightened happily. This was a good song. His big brother sang it yesterday. She'd like this one. His voice soared unsteadily:

"There was an ole man
And he had a wooden leg,
He didn't have no money
And he didn't wanna beg,
So he took four spools
And an ole tin can
And he called it a Ford
And the darn thing ran!"

The children liked it. They laughed and some of them jumped up and down and clapped their hands. He beamed upon them joyously. Miss Lane had seemed to like it, to, but when the children started to jump around, she became angry.

"Francis, you've upset the whole room. You may stand in the hall."

Stand in the hall! Only naughty boys like Ettore were sent in the hall. What had he done? She had told him to sing the song. His lips trembled

"You-you said-"

Just then he saw the door knob move and waited tensely. The Boss! With his hatchet, perhaps! Miss Lane saw the door knob, too, and said, sharply,

"Did you hear me, Francis?"

The door opened. It was only Mr. Jackson, the crabby old man with the glasses who came around every month or so, and asked questions, and said "Ahem!" if you didn't know.

Franics trailed out into the hall dejectedly. He tried to wipe his eyes, but his hands were covered with the too-long sleeves of the red sweater. It was Margaret's sweater and he mustn't spoil it. He rolled the sleeves up carefully and leaned against the wall to think. If he hadn't sung, she would have punished him. He sang beautifully and she punished him anyway. You never know what they want.

The sun came out and little gold-framed shadows danced near the open doorway. He looked out the door, then moved out onto the steps to better see another radiant tree dropping lavish gold coins into the muddy road. Francis sat on the steps, absorbed.

Paul's little sister Ingeborg tottered out from the yard across the way to catch the shimmering coins and gather them into a shining heap by the road. She saw Francis, and holding up a handful, spilled them over her head, laughingly. Francis laughed, too, and waved. Ingeborg was a nice little kid, even if she did make strange sounds called Swedish instead of talking.

Suddenly he straightened, taut, alert. The fire siren! Hurrah! The fire engine was coming! He jumped up and danced in the doorway with excitement.

All at once he remembered Ingeborg, and stared horror-stricken. She was still in the middle of the road, pouring leaves over her dainty self and laughing to him.



HUBERT UPJOHN APPOINTED SUPERINTENDENT OF LOS ANGELES COUNTY SCHOOLS.

Mr. Hubert S. Upjohn, formerly assistant county superintendent of schools, and since June, 1928, acting superintendent, was recently appointed as head of the school system of Los Angeles county, California. Mr. Upjohn was appointed from a list of 22 and was one of the three highest in the civil service examination held for the position.

position.

The new superintendent was born in Kalamazoo, Michigan, January 4, 1881, receiving his schooling there and his first college work. In 1903 he was graduated from the University of Chicago with the degree of Ph.B., after which he taught in the high school at Lansing, Mich.; later he was principal of the high school at Grand Haven; he also taught in the academy at Pocatello, Idaho. In 1908, he taught at Riverside, Calif., and in 1912 he resigned to become principal of the high school at South Pasadena, which position he held until his apointment as assistant county superintendent under Mr. Mark Keppel. Since the death of Mr. Keppel in June, 1928, he had been acting superintendent of schools of the county.

"Ingeborg! Get out of the way! The fire engine is coming!" he called desperately.

She didn't understand. Helplessly he realized that she couldn't, and in the same instant he saw the engine turning the corner and bearing down upon her like a red demon. In a flash he was off the steps and running toward the road.

It seemed so far—so far—. His little legs twinkled past each other frantically. She had seen the engine, now, and stood petrified with terror. He caught her dress with a mighty tug, and they both tumbled into the gutter as the engine whizzed by.

Gee! He stood up, slowly, and drew a long breath. Ingeborg was clinging to him, crying, and she was all muddy. He looked at himself in dismay. So was he—and Margaret's red sweater! He saw Teacher running towards him. He'd catch it now, all right! He'd gone outdoors instead of staying in the hall, and he'd muddied Margaret's sweater. His bright head drooped forlornly.

He felt himself caught up in Teacher's arms and braced himself for a shaking. But, no, she was holding him tight, and laughing and crying, and saying strange things. Incredible things.

"Francis! Francis! You brave boy! You adorable angel! Oh, what a fright you gave me!"

He was taken into school, triumphant, but very, very thoughtful. You did what they said and they punished you. Then you did what they said not to do, and they called you nice names and hugged you. After all, teachers are funny!



# Financing Public Education<sup>1</sup>

Dr. E. E. Lewis, Ohio State University

In this paper we shall attempt to defend the following theses: (1) The cost of education is increasing; (2) the cost of education will continue to increase: (3) the real causes for the increase are beyond the control of public-school officials; (4) therefore, public-school officials should worry less about the fact that the cost of education is increasing and worry more about methods of financing the increased cost; (5) the general property tax as the chief means of financing public education is inadequate; (6) education officials should recognize this fact and should spend their time and energy in creating public sentiment, and in securing legislation that will make it possible to use other and better

#### 1. The Cost of Education is Increasing

means for supporting public education.

In recent years, the cost of public education has increased by leaps and bounds. In 1879, we spent \$1.64 per capita of the total population of the United States for public education; in 1926, \$17.25. For each pupil in average daily attendance, we spent \$101.19 in 1926. For each day per pupil in average daily attendance we spent 11.8 cents in 1870, and 60 cents in 1926. The increase from 1870 to 1920 was slight. From 1900 to 1910 it nearly doubled and from 1910 to 1920 it doubled again. Since 1920 the cost has continued to run up, the per capita cost increasing from \$9.80 in 1920 to \$17.25 in 1926.2 It will probably double again in the ten year period: 1920 to 1930.

Furthermore, the cost of education varies widely from rural district to rural district, from city to city, and from state to state. This wide variation may be due to the differing degrees of interest in education, or to differences in the per capita wealth of communities, or to the relative percentage of children in public and private schools, or to all three factors combined. Nevertheless, it is a fact that in rural schools the cost per pupil varies from \$15 to \$125, a ratio of over 1 to 8. The variation in cities ranges from \$24.76 to \$175.36, a ratio of 1 to 7, and in states from \$29.65 to \$126.65, a ratio of 1 to 41/2. On the average, about 38 per cent of the expenditures of both cities and states is for education. This is more than twice that expended for any other item except protection of person and property in

There is a difference, to be sure, between the apparent and the real cost of education. This is brought out by Foster in a recent study of the increased cost of education in Ohio. In Table I, Foster<sup>3</sup> shows that while the actual expenditures for public schools in Ohio in 1924 was 838 per cent of the corresponding amount in 1900, the expenditures in 1924 based upon the purchasing power of the dollar was only 450 per cent.

One of the reasons for the true increase of 450 per cent is the large increase in attendance since 1900. When the actual number of days attendance in 1924 is compared with the same item in 1913, the cost of education in Ohio per pupil in average daily attendance is considerably less. The total increase per unit of service is only 176 per cent.

"This increase of 176 per cent can be better accounted for by the fact that the greatest real gains in attendance have been made in the high schools where instruction is much more expensive than it is in the elementary schools. Nationwide surveys of public-school finances show that on the average each additional day of instruction in high schools costs approximately two and one-half times as much as an additional day's

TABLE I Relative Weight of Factors Affecting Increase in Cost of Education in Ohio

	Factors Involved the Expenditures for Public Schools	4	Dollars Actually Spent	Percentage of Total Cost in 1900
(1)	Total Cost of Public Schools in 1900	s	13,335.211	100
(2)	Increase Chargeable to	*	10,000.211	
(3)			51,677.063	388
(4)	Increased Attendance, assuming the same Kinds and Quality of Service as in 1900 Increase Chargeable to I mprovement in Amount and Quality of		11,734,986	88
(5)	Service for the Increase in Attendance since 1900		16,417,100	123
(6)			18,602,311	139
	Schools in 1924 (Sum of items 1 to 5 inclusive)		111,766,671	838

instruction in elementary schools. The average day's attendance in the elementary schools in Ohio increased only 25 per cent from 1900 to 1927, while the average daily attendance in the high schools increased 215 per cent, or about six times as rapidly. The number of pupil days in elementary schools increased 30 per cent in Ohio between 1915 and 1927 and the number of pupil days in high schools increased 119 per cent.'

Foster has made an elaborate statistical calculation in which he establishes a comparable unit. He concludes that there is actually only about 139 per cent increase in cost of education per unit of service rendered. This net increase must be attributed either to improvement in school conditions, that is, in the amount and quality of service rendered, or to wasteful methods of management. He concludes that it seems improbable that the major portion of this increase of 139 per cent has been due to waste. The schools of today offer at least twice as much in the way of housing, curriculum, and quality of instruction as did the institutions of 25 years ago.

Foster concludes that "while real economy should be practiced wherever possible, Ohio is not paying an exorbitant price for education in comparison to what it paid in 1900." His study clearly shows that the improved training of teachers and the consequent increase in the quality of instruction offsets the slight increase in the cost of the teacher's salaries. He is of the opinion that no attempt should be made to reduce expenditures by lowering the salary of administrators, supervisors, and teachers.

We may summarize by saying that for every dollar spent for schools in Ohio in 1900, \$8.38 was spent in 1924. Of this increase of \$7.38, \$3.88 was chargeable to the depreciation of the dollar; 88 cents to increase attendance, assuming the same kinds and quality of service as in 1900; \$1.23 to improvement in service rendered for the increase in attendance, and only \$1.39 to improvement per unit of service rendered in 1900. It is consistent to expect improvement in service over a period of 25 years. It is also consistent to expect to pay a fair price for this improvement. All of the data available show that there is little reason for believing that we are now paying an exorbitant price for education in comparison to what was being paid in 1900. In fact, we may well marvel at getting so many improvements at so little additional cost. The figures for Ohio are probably typical for the country at large.

#### 2. The Cost of Education Will Continue to Increase

Here we enter the field of prophesy, which is always a dangerous field for one who is inclined to be scientific. There are at least four reasons why it seems reasonable to expect a continual increase in the cost of education-not only a

gross increase in cost, but also a net increase in cost.

In the first place, the wealth of the nation continually increases. In 1912, the national income was thirty-three billions, and in 1920 it was seventy billions. In 1912, we spent 1.46 per cent of our national income for education, and in 1920, 1.48 per cent. It is reasonable to expect that as our national income increases, we will continue to expend at least as large a per cent of it for education. In fact, we might reasonably expect to increase the percentage.

We spend annually about eight billions on crime and only two and one-half billions on education. We spend upwards of twenty billions on various forms of luxuries such as candies, tobacco, cakes and confections, perfumes, cosmetics, clubs and theaters as against two and one-half billions on education. The value of our exports in the year 1920 was more than eight times the amount expended for public schools. The value of our imports was more than five times as much, and the products of our mines were worth almost seven times as much; the income of our life insurance companies was worth almost twice as much. The value of our farm products in 1920 was 25 times the sum expended for schools.

It is perfectly apparent that the American people are able to support education not only on the present, but on an increasing scale of expenditures. There is no reason why the present scale might not be doubled, tripled, or quadrupled. The wealth is here. This is a fact beyond dispute.

A second reason for predicting an increase in expenditures is the ever-increasing faith that the American people have in what education will do for the children of the nation. This has become a fetish, a mania. Each generation expects more education than the previous generation. Each generation consumes more education than the previous generation. Fathers and mothers want more and better education for their children. This manifests itself in the lengthening of the school year, the increase in the average daily attendance, the expansion of the curriculum, in the kind and type of courses offered the pupils, etc. If one reviews the last 25 years on any one of these items, the increase is startling. This percentage may be slowing down, but it is by no means ended. Witness the universal interest at the present time in junior high schools, junior colleges, radio and visual education, free night schools, education for the hard of hearing, for pupils of defective eyesight, and for other disgenic groups, the expansion of library service, etc. There is a real enthusiasm for public education; the people want it, especially the parents of the children.

Witness again the joy with which education is appreciated by children of this generation as compared with children of the previous generation. There can be no doubt but that the children of today like to go to school better than they did at any previous time in history. This in itself is a tribute to the schools. The schools have become and are becoming more attractive. Education is really being sold to the consumer, the boys and girls, and to the parents who pay for it, on a much vaster scale than ever before. This is a very evident psychological fact of vast significance. Boys and girls of today like to go to schools. Their children are going to like it and like it still more than did their parents, and the parents are going to demand it as one of the inalienable rights and privileges of citizenship. This is a very potent argument in defense of the thesis that the cost of education will continue to increase.

Again, before the world war, it was freely predicted that a world war was impossible. The

An address delivered before the National Association Public-School Business Officials. Columbus, Ohio, ay 22, 1929. U. S. Bureau of Education—Bulletin No. 39, (1927) Foster, R. R., Report on Finance to Ohio State Edu. ssn., 1929.

bankers would not permit it. When the war broke out, it was again predicted that it would not last long. The bankers would not permit it; and it would soon close. Later, at the time of participation of the United States, it was predicted that five or six billions might be raised by the sale of Liberty Bonds, but upwards of twenty-one billions were actually raised without reaching the limit, and in the rehabilitation settlements with the different countries America has probably contributed eight to ten billions for that purpose alone. This was unbelievable prior to the war.

I mention this to illustrate and to partially prove a point which I desire to make. My point is that the limit of financial support for any enterprise is not only financial, but also psychological. We buy what we want. We constantly confiscate our capital in order that we may have highly perishable articles, such as automobiles. While there may be an absolute limit, it is not readily discernible. The desire for things creates a desire to go out and earn the things desired. Education is a wealth producer as well as a wealth consumer. The best educational area consumes and produces the great amount of wealth.

Therefore, I argue that we will increase our expenditures for education, simply because the people want education and because in the long run education is wealth producing. How rapidly this increase will take place is, of course, problematical. In the last analysis, it depends, in part, upon the salesmanship of public officials, but chiefly upon sociological forces over which school officials have little or no control.

Good will and public confidence as well as real service are the important necessities in a program of progressive education. The tremendous wealth of America is due not only to natural resources, but also to the will of the people and the general level of intelligence. The standard of the American working man is the marvel of the world. There seems to be no desire to lower the standard but, on the contrary, the tendency seems to be to increase it. We are in a new economic era in which old standards are rapidly giving way to new conceptions. Big business no longer desires ignorant slavelike serfs as employees. No, big business is paying big wages for shorter hours to highly educated workmen in order that the workmen in their increased hours of leisure may have the money to buy and consume the products which they make in their working hours. It is a cycle but not a vicious cycle. A cycle in which education plays an increasingly important role.

#### 3. The Causes for Increase Beyond Control of School Officials; (4) Therefore, School Officials Should Worry Less About the Increasing Cost and More About the Methods of Financing

We may conclude, then, that the gross as well as the net cost of education has increased and that it will in all probability continue to increase during the next 25 years. Perhaps not at the same rate but surely it will increase unless an unforseen cataclysm occurs to American civilization. We must make up our minds to this fact and plan accordingly. The factors causing this increase are factors over which we as school officials have little or no control. We cannot stop the increase in the wealth of the nation, and we would not desire to do so if we could. We cannot stop the strengthening of the educational traditions. I do not believe we would want to stop it if we could. For over a hundred years, there has been a vast propaganda, a preaching of the gospel of education, and what education would do for the children of the nation and for the nation itself. We, as school officials, believe this gospel. It is part of our habit patterns. H. G. Wells and others have echoed the sentiment around the world. The services of the schoolmaster are at last recognized as a great national asset. In fifty years we have stepped beyond the notion that education is a privilege; now it is conceived as



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an obligation. We make children go to school; we make parents send them to school, and we try to make the school attractive to all kinds and types of children. We do all of this in response to public demand. We have little control over this demand. It behooves us, therefore, to quit complaining about the increased cost of education. We should, of course, as a matter of good business sense practice all reasonable economics but not unreasonable economics. We should become educational statesmen. If we really believe in education, it behooves us to spend our time figuring out new and better ways of supporting education on a vaster and more efficient scale commensurate with the increased wealth and complexity of civilization. This calls for real constructive and creative leadership,

## 5. The General Property Tax as the Chief Means of Financing Public Education is Inadequate

If we are to continue to support education on an increasing scale of development, it is obvious that we must resort to new methods of financing. The sources of school support in the United States at present are as follows:

<sup>1</sup>U. S. Bureau of Education, Bulletin No. 39 (1927)

From all other sources

 $\begin{array}{ccc} 67.9 & 68.0 \\ 8.3 & 10.6 \end{array}$ 

 $\frac{78.2}{5.3}$ 

 $72.1 \\ 9.8$ 

This table shows that a little more than threefourths of the support for schools comes from counties and local districts. The variations are very wide. For example, in Wyoming the local districts contribute about 48 per cent; in Virginia and Tennessee only 15 per cent; in New Mexico, Nevada, and Louisiana, only 16 per cent; at the other extreme we find that in Rhode Island 96.1 per cent of all the receipts for school purposes are received from local districts; in Nebraska 98.6 per cent; in West Virginia 96.4 per cent; in Kansas 99.3 per cent. In fact, the per cent of support furnished by the states ranges from 0.2 per cent in Kansas to 81.5 per cent in Delaware. Omitting Delaware, which is an extreme case, the upper limit is 39.1 per cent, in Texas. "The range for the counties is from zero in 16 of the states to 69.6 per cent in New Mexico. In all there are 8 states that derive more than 40 per cent of their school support from the county. From local districts Virginia derives the smallest per cent (15.6), while Kansas derives the largest (99.3)."

The states do not reveal any significant change in policy during the period between 1890 and 1926. In 1890, a total of 18.4 per cent of all school

receipts were from state taxes. This was decreased to 13.9 per cent in 1926. If any change is discernible, it is in the direction of a large per cent of the burden being thrown upon the county and local taxes. In 1890, as much as 67.9 per cent was derived from this source and this was increased to 79 per cent in 1926.

However, there are certain states that are frankly recognizing the necessity for a larger taxing unit. This means the spread of taxes for school purposes over a larger geographical and population area. Since the close of the war, the following states have increased the amount of money furnished from state funds for education: Arizona, California, Georgia, Iowa, Louisiana, Massachusetts, Texas, Utah, Washington, and West Virginia.

The general character of the legislation creating these increases is shown by these examples: Arizona in 1921 increased the amount furnished by the state by 66 per cent. In 1920 California, after a constitutional amendment, increased the state's quota from \$17.50 to \$30 per pupil in the elementary schools, while for high-school pupils the increase was from \$15 to \$30 per pupil. In 1919 Georgia decided to devote 50 per cent of all the money received by the state to the support of common schools. In 1919 Massachusetts passed a law which raised the state's share of the cost of schools from 1.82 per cent in 1915 to 11.3 per cent in 1921. In New York the state furnished 9.3 per cent of the support of schools in 1905; in 1918 it furnished 9.5 per cent; in 1920, 12.1 per cent; and in 1921, 21.9. In 1921 Pennsylvania enacted a law fixing minimum salaries for teachers. According to this law the state pays, in districts that meet the standards fixed by the state, the following percentages of the teachers' salaries: first-class districts, 25 per cent; second-class and third-class districts, 35 per cent; fourth-class districts, 50 per cent. Washington, in 1920, increased the proportion of the cost of schools to be borne by the state from 18 per cent to 25 per cent.

These illustrations show very definitely the tendency in a number of states. Such action is to be taken as a frank recognition of the fact that education is to a certain extent a function of the state.

Obviously, any increase in the control of education by the state represents no modification of the fundamental principles of American government.

The question may be argued, however, from a wholly different point of view, namely, that of expediency and the consideration of what, after all, constitutes a local unit of government. As to the latter question, it appears that the state is a local unit of government as compared with the United States Government; the county is a local unit as compared with the state; the school district is a local unit as compared with the county; each ward in a city is a local unit in relation to the entire city. "Local" does not connote any fixed unit of territory, but is a relative term. This being the case, the question becomes one of expediency rather than one of principle.

There is no question but that larger taxing units such as the county or the state make this more easily possible than small units such as the school districts. This has been amply demonstrated in those states that have adopted a system providing for larger units.

In reply to the argument that a wealthy district should not be taxed to assist in supporting schools in another district it may be said that any principle which may justify such position has long since been discarded in American government. Wealthy individuals are taxed to build roads that are used by poorer people; the wealthy are taxed to erect city halls and other buildings that serve the interests of poor people as well as of richer ones; men with no children are taxed to support schools that are attended by children of other men.

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There are among the states in their ability to support schools, differences as great as those among counties and school districts within a single state. In 1920 in Nevada the average wealth for each child from five to eighteen years of age was \$48,000, while in Mississippi it was \$3,000

It is obvious, I believe, that the expansion of education which the present and future America requires will necessitate an expansion of funds quite impossible to the old tax system. In fact, the old system is a hang-over from the old industrial period that is rapidly passing away. It fails to tap the resources of modern industries and business. The highways are no longer financed by a general property tax. Highway extensions and improvements in the last ten years have been made possible by the adoption of a sales tax. I believe that now every state in the union uses a tax on gasoline for the support of highways. Why should not a similar plan be used on tobacco, theaters, and certain other forms of luxuries for the support of education? There can be no doubt about the available wealth.

The only doubt is in the method of relieving the property from tax and of taxing other articles. In certain states severence taxes are used. These states are rich in mine products, oil, and in some instances lumber, and other natural resources. The point I am making is that a nation-wide campaign should be made, especially by business officials for new and better methods of raising money. Everywhere but in America, according to various authorities, the general property tax is being abolished. Seligman says: . "that the general property tax as actually administered today is beyond all peradventure the worst tax known in the civilized world."

The authorities agree that soon or later it will have to be abolished in America or partially abolished. The report of the National Tax Association Committee agrees upon the following principles for states. That these should constitute the basis upon which a unified system of state and local taxes should be based.

6. Education Officials Should Recognize this Fact and Should Spend their Time and Energy in Creating Public Sentiment, and in Securing Legislation that Will Make it Possible to Use Other and Better Means for Supporting Education

Any proposed system of state and local taxation must, at the very outset, recognize certain existing conditions, conform to certain practical requirements before it can be seriously considered as a basis for legislation. These conditions and requirements, the tax association committee has had constantly in mind. They may be stated briefly as follows:

A. The proposed system must yield the large revenues which our state and local governments require at the present time.

B. It must be practicable from an administrative standpoint; that is, it must be capable of being administered by such means and agencies as the states have at their command or can reasonably be expected to provide.

C. It must be adapted to a country with a federal form of government, and to this end must reconcile the diverse claims of our several states, which now conflict at many points, thereby producing unjust multiplication and disregard of interstate comity.

D. It must respect existing constitutional limitations, federal and state, or else point to practicable methods of constitutional amendment.

E. It must represent as nearly as possible a general consensus of opinion, and to this end must give careful consideration to the most influential body of opinion developed and formulated by the National Tax Association.

F. It must not propose measures wholly foreign to American experience and contrary to the ideas of the American people. .

Study of the tax laws of the American states reveals the fact that there are three fundamental

#### DEDICATING THE SCHOOL'

By William Henry Scott

Let us now with earnest hearts and with exalted faith and hope solemnly consecrate this building to its high and holy purpose. May the youth of this community for genera-tions to come gather in this place to receive instruction in knowledge and training in virtue. May they find here every condition necessary to a true and enlightened education. Especially, may their teachers be examples of excellence in scholarship and character, seekers after goodness and truth, lovers of children, enthusiasts, and adepts in the finest of all arts, the development and inspiration of human souls. May these rooms always be pervaded with an invigorating atmosphere of mental and moral life, and may no child pass from these schools to higher grades or to the outer world without having been made more virtuous, and in every way more capable of wise and just, of useful and noble living.

To this end, may the blessing of God be upon child and parent, upon pupil and teacher,

upon principal and superintendent, and upon everyone whose influence will in any degree affect the work of education as it shall be con-

ducted within these walls.

The above is an address prepared by a citizen of Columbus and delivered at the dedication of a local school building.

principles which have been more or less clearly recognized by our lawmakers. . .

The first is the principle that every person having taxable ability should pay some sort of direct personal tax to the government under which he is domiciled, and from which he receives the personal benefits which that government confers. . . .

The second principle is that tangible property, by whomsoever owned, should be taxed in the jurisdiction in which it is located, because it there receives protection and other governmental benefits and services. . . .

The third principle, somewhat less clearly and generally exemplified by our tax laws, but discernible none the less, is that business carried on for profit in any locality should be taxed for the benefit it receives.

The same report summarized the recommendations for a model system.

1. Personal-income tax. The first decision reached by the committee was that . . . . there should be a personal tax levied with the exclusive view of carrying out the principle that every person having taxable ability should pay a direct tax to the government under which he is domiciled. . . . The committee . . . . is of the opinion that a personal-income tax is the best method of enforcing the personal obligation of the citizen. . . . It is contrary to the theory of this tax that it should apply to the income from any business as such, or apply to the income of any property as such. The tax should be levied upon persons in respect to their entire net income, and should be collected only from persons and at places where they reside. . . . The committee believes that the amount of the income exempted from the personal-income tax should not exceed \$600 for a single person and \$2100 for a husband and wife, with a further exemption of \$200 for each dependent up to a number not to exceed three. . . . The lowest rate should be not less than 1 per cent, and under present conditions we regard it as inexpedient to impose a rate higher than six per cent. . . .

2. Property tax. The second part of the tax system proposed by the committee is a tax upon tangible property, levied exclusively at the place where the property is located. . . . We recommend that it be confirmed to tangible property, and that intangible property of all descriptions be exempt from taxation as property. . believe that the personal income tax which we have already recommended will reach income from intangible property fully and fairly at the

only place where it can be taxed without running the risk of unjust double taxation.

The primary work of assessment will, of course, continue to be done by local authorities; but it is essential that such work should be supervised, and, where necessary, controlled by a competent state tax commission or tax commis-

3. Business tax. A properly constituted business tax . . . . which should, except in certain cases, be levied on the net income derived from business carried on within the state levying the tax. The rate of the business tax should be proportional and not progressive. . . . We believe that, in general, a tax of 2 per cent of such income would be adequate. . . . The rate in no case should exceed 5 per cent. The administration of a business tax must be placed in the hands of the state tax commission or tax commissioner. The business tax we recommend is proposed as a substitute for all existing business taxes.

4. Inheritance tax. The committee strongly favors the use of the inheritance tax by the American states; . . . none of our recommendations, if carried out, will interfere in any way with the levy of inheritance taxes by the

states.

5. Taxes on consumption. The National Tax Association will do well to appoint a committee to canvass carefully the possibility of supplementing existing sources of state and local revenue by taxes levied upon what may fairly be classified as luxurious consumption.

6. Tax administration. Assessment districts should be large enough to justify the employment of at least one permanent official in each district, who should receive a salary sufficient to make it possible for him to give all his time to his work. Such permanent assessors should be provided with well-equipped offices, a suitable number of permanent clerks, and such parttime assistants as may be needed for a short period each year. . . . The committee favors the method of appointment, since it does not believe that, other things being equal, elective officials can or will perform their work as efficiently as appointive. . . These officials should serve for a term of at least four years. . . All assessors, whether elected or appointed, should be subject to removal for willful negligence or malfeasance while in office. A permanent tax commission, or tax commissioner, should be established in every state. . . . The proposed personal income and business taxes should be administered by state rather than by local authorities.

7. Separation of sources of state and local revenue. The plan we propose does not require any separation whatever of the sources of state and local revenue, but . . . . it is not inconsistent with the adoption of a thoroughgoing scheme of separation. . . . The committee is of the opinion that a partial separation of the source of state and local revenue is desirable, but that complete separation, by cutting the connecting cord between state and local governments, tends to destroy the state's sense of responsibility in the

matter of local taxation.

There is no phase of educational administration to which leaders, and indeed teachers in general should give more acute and critical attention than to the problem of new methods of taxation. The reforms and advancement required in education can never be accomplished or even approximated without a fundamental reconstruction of our entire fiscal philosophy and a complete reorganization of our tax system. The old system cannot equalize educational opportunities for different localities; it cannot furnish sufficient funds without serious injustice to certain individual or taxpayers; it cannot distribute the tax burden with equity.

Professor Seligman says: "While it is true that the educational budget has increased more rapidly than the population, it is not true that it has increased more rapidly than the wealth of

(Concluded on Page 142)

# Budgeting Equipment for a New Building

Harry S. Ganders, Professor of Education, University of Cincinnatti

School authorities often are so desirous of obtaining a monumental school building that problems of equipment are almost entirely overlooked. It is, however, through intelligent choice of equipment that a school building is given its real educational significance. All too often no provisions are made for equipment until the board's funds, as well as its patience, have been exhausted upon the building itself. Most of the money that should have been set aside for equipment is absorbed by architects and contractors in "alterations" and "improvements," simply because equipment needs were not budgeted at the outset and proper deductions made for it from the total bond issue.

Even in cases where some unabsorbed balances remain after the building is completed, expenditures for equipment are unguided and uncontrolled due to the absence of thoroughgoing equipment budgeting. As a result, the most important hygienic and educational values are ignored in favor of the sole consideration of cost.

The completed building must be equipped; the absence of adequate funds not withstanding. Hence cheap equipment and old obsolete items are brought over to the new structure from the now abandoned old buildings. Thoroughgoing equipment budgeting is the remedy for this most unbusinesslike and unintelligent practice.

#### The Percentage Estimate Is Inaccurate

In some cities attempts are made to set aside funds for equipment. The most common method is the "percentage of total building costs" or "lump-sum" estimate. Some architects allow about 8 per cent of the building cost, to cover equipment costs for an elementary school and about 12 per cent in case of a high school. The simplicity of this method recommends it; it is as inadequate as it is easy.

It should be recognized, that architects are not equipment engineers. Few know the details of school equipment needs. Their primary interest is in a good building. If insufficient funds remain for equipment, that is not their concern. There is no uniformity among school buildings of various cities, nor are equipment "set-ups' available that would justify a flat percentage estimate being applied everywhere. The percentage estimate is based on equipment of existing buildings, many of which are inadequately equipped. Furthermore, neither architects nor school authorities have made a thoroughgoing study of all items of equipment that should go into a "typical" elementary, junior or senior high school. The need for such an investigation is apparent.

Even if the same standard equipment were provided in standarized buildings, there is every reason to believe that differences in costs would not vary together from year to year.

This prevailing method of percentage estimating has been shown by Loomis1 to be unreliable, inadequate, and inflexible. Probable differences in the percentages for equipment of the total cost, where only three of all the possible variables are allowed to affect the percentages, is shown in 8 hypothetical cases as follows:

#### CASES

(Based on Loomis' Data)

a) Where cost of equipment is kept constant and
1. Minimum building cost per cubic foot of 20c is assumed.
2. Maximum building cost per cubic foot of 40c is assumed.

b) Where cost of building is kept constant and
3. Maximum cost of equipment due

Percentage of Total Cost of Building for Equipment

12

to an assumed 50 per cent increase in quantity needed is assumed 

assumed Maximum building costs and minimum equipment costs assumed

d) Where both building and equipment costs vary to the extreme in the Where both building and equipment costs vary to the extreme in the same direction and
7. Maximum equipment costs and maximum equipment costs are assumed
8. Minimum equipment costs and minimum equipment costs are assumed

It is evident from the above that possible variations in costs may cause a difference in the percentage for equipment to vary from 41/2 to

Loomis points out, that in addition to being unreliable, the percentage basis is inadequate, because estimates are not in detail and consequently expenditures cannot be guided and controlled by them. It is evident also, that percentage estimates fail to make any allowance for the special needs of a particular school or differences in financial ability to buy equipment.

#### A Procedure for Equipment Budgeting

Preliminary steps in equipment budgeting are: (a) the determination, by the superintendent of schools, of the proper location, size and type of the building; (b) the determination of the number and type of classrooms, cafeterias, shops, and other units that must be included; and (c) the decision by the educational staff of the educational activities to be carried on in the various rooms.

The actual procedure of equipment budgeting can now be undertaken.

1. The first step is to list the number and types of all items of equipment for each room that will be necessary for carrying out the proposed educational program of the school. Types or kinds of equipment items should be designated by numbers corresponding to item numbers in standard specifications.

(Hundreds of industrial concerns have been induced to use standard, or Master specifications in the manufacture, and "Specification Labels" in the sale of their products. This was accomplished by the Federal Specifications Board under Secretary Hoover. Cooperative development of standard specifications for school equipment might be as feasible. It is certainly desirable.)

2. An evaluation of items of equipment in buildings being replaced should then be made. Such evaluations should be in terms of the standard specifications. The number of items in old buildings that conform in major respects to the specifications should be entered as reductions from the original list in the above. If no standard specifications have been developed and none



are available, the committee merely exercises its judgment.

3. The superintendent should inform his committee of the action of the board determining which quality-level specifications are to be used. Where specifications on-but-one-level have been developed, or where there are none, the superintendent informs the committee which one of Loomis<sup>2</sup> 1925 lists is to be used.

4. The superintendent's committee, using the designated price list, resubmits the recommended list of equipment until no further revisions are necessary. Following is the form of this report:

5. If this equipment budget is being prepared in 1929, it is necessary to measure the change in price level from 1925 (the year for which the Loomis price lists were prepared) to 1929. The 1925 and the 1929 prices must be paralleled and calculations made as illustrated in Loomis' study. The 1929 quotations, or those for any current year, can be obtained from the Division of Field Studies, Institute of Educational Research, Teachers College, Columbia University.

It is safe to predict that within a few months the calculations in Column 5 will no longer need to be made locally. The current publication month by month of an index of school equipment prices is as necessary as the monthly publication of the index of "The Cost of Living for Teachers," the "Index of the Price of School Buildings," the "Index of the Price of Instructional Supplies" now being published in various journals, and the "Index of School-Bond Prices," which is published monthly in the SCHOOL BOARD JOURNAL.

6. The report prepared according to Column 4 above, gives prices at the 1925 level. Suppose the index number 1.03. In order to change the total cost as estimated for 1925 in Column 4 to the cost for 1925, the current year, multiply the 1925 cost by the index number 1.03. The product is the estimated price of equipment for the new school at 1929 prices.

7. The total in Column 6 above does not include costs for freight, therefore, the average distance of supply houses which furnish major items of equipment should be calculated, shipping weights and freight rates ascertained, and an estimate of freight charges made. This should be added to the total estimate in Column 6.

8. The total in Column 7 does not include cost of installation. Current local labor prices must be learned, total time estimated and these costs added to the total in Column 7. This is the final estimated cost of the equipment for the new building.

# Benefits to be Derived From Equipment Budgeting

A comprehensive, intelligent budgeting of the detailed items of school equipment somewhat in conformity with the above procedure is a necessity. Benefits which result from good business practices are as attainable in equipment management as in other fields. Equipment budgeting is foundational to determining the degree of completeness of equipment for each new school unit, the detailed selection of items, equipment purchasing and payment, and equipment accounting.

Budgeting of equipment will result in (a) controlled expenditures, (b) directed expenditures, (c) sufficient funds available when obligations become due, (d) more time, and a better basis for giving consideration to hygienic and educational values in equipment selection and (e) better equipment at more favorable prices.

<sup>1</sup>Loomis, A. K. The Technique of Estimating School Equipment Costs. Bureau of Publications, Teachers Col-lege New York, 1926.

<sup>&</sup>lt;sup>2</sup>Loomis, A. K.—"School Equipment Costs": Strayer, G. D. and Engelhardt, N. L. School Administration Series—Bureau of Publications, Teachers College, Columbia University, New York, 1926.

### Should There be Salary Distinctions Between Men and Women Teachers?

Arthur H. Hathaway, Ohio University, Columbus

Teachers in many of our public schools today receive practically the same salaries for equal merit, training, and experience regardless of sex. Men and women are on an almost equal basis. Many educational writers advocate a single salary schedule which makes no distinction between the sexes, or at least, only a very small one. In an article published in April, 1926, Dr. E. E. Lewis¹ says: "Between the sexes there should be, wherever possible, equal pay for equal merit, equal training, equal experience, and equal work."

With these facts in mind let us take a brief glance at the salary situation in other lines of work. Since most of our available salary statistics are given for men and women as a group, rather than separately, this treatment of the subject must necessarily be limited to a small number of occupations for which the data are availabale for the respective sexes. In the author's opinion, the spread between the wages of men and women workers presents a problem which merits extended and scientific investigation.

The Monthly Labor Review, published by the United States Bureau of Labor Statistics, in the March, April, September, October, November, and December issues for 1928 and in the January and April issues for 1929, reports the separate wages of men and women engaged in 16 manufacturing occupations throughout the United States. These reports have been carefully summarized in Table I. The combined tabulations include a total of 322,844 males and 146,134 females, employed in 1,962 industrial establishments throughout the nation. In the original reports only the average weekly earnings were shown. In order to interpret these figures in terms of annual earnings, a year of 50 working weeks was used as a basis, and the annual wage difference between the sexes computed. It should be remembered that this year of 50 working weeks was arbitrarily established, and that the actual number of weeks worked annually was not given. What effect this would have upon the annual wage differences between the sexes is, of course, a question for further study. On the other hand, the differences in the weekly wage rates of the respective sexes should remain unchanged. Probably the most significant part of the table is the last column which shows what per cent man's salary is of woman's in each occupa-

Table I should be read as follows: In the manufacturing of cotton goods the scope of the study included 11 states, 158 plants, 49,861 men and 38,145 women workers. The weekly wages was for the men \$18.60, for the women \$15.66; the annual wages for the men was \$930, and for the women \$783, giving an annual difference of \$147 in favor of the men. In terms of per cent, the men were earning 118.77 per cent as much as the women. In other words, the earnings of the

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men were 18.77 per cent greater than those of the women. In all of the occupations the range is from 118.77 per cent to 203.10 per cent that man's salary is of woman's; the median is 158.34 per cent. Another way of saying the same thing is that men earn from 18.77 to 103.10 per cent more than do women, the median being 58.34 per

It is interesting to note that in all of the occupations, except the first, the men were earning over 30 per cent more than the women. If men in the teaching profession were paid 30 per cent more than the women, it would mean that for a woman receiving \$1,200 a man of equal merit, training, and experience should receive \$1,560; for a woman receiving \$1,800 a man should receive \$2,340; for a woman receiving \$2,400 a man should receive \$3,120; and where the woman is paid \$3,000 the man should be paid \$3,900.

In the last 10 instances—five eighths of the occupations included in the study-mer were earning over 53 per cent more than women. Apparently, judging by the nature of the occupations included in this group as compared with the first 6, there is a distinct tendency toward a greater difference in wages in favor of the men whose work is more highly specialized. Certainly teaching is a profession requiring more skill than even the making of ladies' fancy hose. If a salary schedule providing a difference of 50 per cent in the salaries of men and women teachers were to be established, it would appear, roughly, as follows: Where women receive \$1,200, men would receive \$1,800; where women receive \$1,800, men would receive \$2,700; where women earn \$2,400, men would earn \$3,600; and where women are paid \$3,000, men would be paid \$4,500. Why shouldn't there be at least as much difference between the salaries of men and women in the teaching profession as there is between the salaries of men and women in the industrial world? Is it any wonder that the women teachers in public elementary and secondary schools outnumber the men by the ratio of 100 to 17?2

Probably the reader will question the ability of women to do the work done by the men in these various occupations. In other words, the nature of the work varies with the sex and therefore the pay varies accordingly. Undoubtedly this is true to a certain extent. On the other hand. the effects of the influence and contact of men with children is peculiarly reserved to men. The public cannot hope for women to substitute effectively for men in this respect.

"It is generally agreed among school people that the historic tendency for the percentage of men teachers to decrease is unfortunate, because it is believed that, at some time in their educational careers, children need to come into contact with masculine influence; this point has been argued with especial reference to the boys and with particular reference to the boys in the upper grades."3

The manufacturing of men's clothes is the only occupation for which comparable data with regard to the exact nature of the work within the various departments of the industry was given. The Monthly Labor Review<sup>4</sup> states that this study included 11 large cities and 2 groups of small cities, one in eastern Pennsylvania outside of Philadelphia and the other in northeastern New Jersey outside of Newark. The large cities were Baltimore, Boston, Buffalo, Chicago, Cincinnati, Cleveland, Newark, New York, Philadelphia, Rochester, and St. Louis. The figures in the study are for 1928 and were obtained from 200 different establishments which employed a total of 17,626 males and 18,247 females. Since some departments did not employ both men and women, only those in which both sexes were found are shown in the comparisons in Table II.

From the data given it appears that the nature of the work done within the various departments in the men's clothing industry is the same for both sexes. A total of 1,670 male basters employed in 86 plants earn an average weekly salary of \$40, while 1,255 female basters employed in 82 plants earn an average weekly salary of \$24.51. In terms of per cent, men basters earn 63.19 per cent more than do women basters. In the eight departments employing both sexes men earn from 63.19 to 132.41 per cent more than do women, the median being 81.38 per cent.

For all departments in the men's clothing industry, including those hiring persons of only one sex, a total of 17,626 men employed in 199 plants were paid an average weekly wage of \$40.75, while 18,247 women employed in 193 plants were paid an average weekly wage of \$23.44. In terms of per cent the men were paid 73.84 per cent more than the women.

Table III shows the ratio of women's median wage rate to men's median wage rate for three different classes of workers in the United States, 1926. The study was made by The National Industrial Conference Board<sup>5</sup> and included 25

 
 TABLE III. Ratio of Women's Median Wage Bate, 1926

 Per Cent

 Salespeople
 47.02

 Wage Earners
 52.76

 Clerical Workers
 58.70

 Total
 56.10
 

basic industries, 1,600 industrial plants, and 771,272 employees.—"Since women furnish very little common labor the group falls mainly in the skilled and semi-skilled class, with possibly a greater emphasis upon the semi-skilled than in the case of male workers."6

Again, in an extensive study including a large number of workers, Table III reveals that women

<sup>3</sup>McCracken, C. C., Morrison, J. C., and Reeder, W. G., A Cooperative Study of Certain Phases of The Fairfield County, Ohio, School System, Ohio State University Studies, Vol. 2, No. 4, p. 23.

<sup>4</sup>U. S. Bureau of Labor Statistics, Monthly Labor Review, Vol. 28, No. 1, Jan. 1929, p. 128-134.

<sup>5</sup>National Industrial Conference Board, Inc., New York. Wages in the United States, 1914-1927, p. 18-19.

<sup>4</sup>Did, p. 21.

<sup>1</sup>Lewis, E. E., "Arguments and Principles Favoring the Single Salary Schedule." The American School Board Journal. Vol. 72: 49-50. April, 1926. <sup>2</sup>United States Bureau of Education, Bulletin, 1928,

rnat. Vol. 72	: 49-50. April,	1926.	No.	25, p. 574.			*Ibid, p. 21.		
TABLE I.	SALARIES OF	MEN AND	WOMEN	EMPLOYED	IN SIXTEEN	MANUFACTURING	OCCUPATIONS IN	THE UNITED STATES	
anufacturing	Number	of Number	of	Number				Annual Per Cer	

Manufacturing	Number of	Number of	Nu	ımber					Salary Differ	- Man's
Occupation	States	Plants		nployees	Weekl	y Salary	Annual	Salary <sup>2</sup>	ences Between	
	in Study	in Study	Men	Women	Men	Women	Men	Women	Sexes	of Women's
Cotton Goods <sup>3</sup>	11	158	49.861	38,145	18.60	15.66	930.00	783.00	147.00	118.77
Woolen Goods <sup>2</sup>	9	92	21.049	17.801	28.06	21.55	1.403.00	1.077.50	325.50	130.20
Underwear <sup>3</sup>	15	84	2.805	12,251	22.92	16.38	1.146.00	819.00	327.00	139.92
Foundries	28	417	38,547	439	31.99	22.64	1,599.50	1.132.00	467.50	141.29
Slaughtering and Meat Packing	****	86	50.207	7.146	25.64	17.87	1,282.00	893.50	388.50	143.48
Dry cells	7	25	3.701	2,648	26.66	18.56	1.333.00	928.00	405.00	143.64
Radio Speakers	8	19	1.551	877	26.15	17.07	1.307.50	853.50	454.00	153.19
Boots and Shoes3	14	157	28,312	20,346	30.63	19.53	1,531.50	976.50	555,00	156.83
Machine Shops	28	526	85,301	1.470	31.51	19.71	1,575.50	985.50	590.00	159.86
Fractional Horse Power Motors	10	24	3.872	1,486	29.43	18.34	1,471.50	917.00	554.50	160.57
Radio Tubes	8	18	374	1.839	30.62	18.27	1.531.00	913.50	617.50	167.59
Radio Receiving Sets	8	23	5.845	4.225	28.05	16.62	1,402.50	831.00	571.50	168.77
Men's Clothings	8	200	17.626	18,247	40.75	23.44	2,037.50	1,172.00	865.50	173.84
New York Office Workers <sup>3</sup>										
(Whole State)	1	*******			46.70	24.05	2,335.00	1,202.50	1,132.50	194.17
Storage Batteries	9	25	4.392	120	31.61	16.22	1,580.50	811.00	769.50	194.88
Hosiery <sup>3</sup>	19	108	9.401	19.044	37.94	18.68	1.897.00	934.00	963.00	203.10

<sup>&</sup>lt;sup>1</sup>U. S. Bureau of Statistics. *Monthly Labor Review*. Vol. 26; No. 3, p. 123-133; No. 4, p. 104-118, Vol. 27; No. 3, p. 138-148; No. 4, p. 89-95; No. 5, p. 120-130;

<sup>131-137;</sup> No. 6, p. 179-188. Vol. 28; No. 1, p. 128-134; weeks.
136-137; No. 4, p. 143-153.

The annual salary is computed on a basis of 50 1927.

TABLE II. Wages of Men and Women in Various Departments of Men's Clothing Industry

Departments <sup>2</sup>	P	lants Study		ployees	We	Man's Salary is of Woman's	
	Men	Women	Men	Women	Men	Women	100 10
Basters	86	82	1,670	1,255	40.00	24.51	163.19
Total operators	174	144	4.605	7.087	43.48	26.22	165.82
Other Employees	146	140	2.562	3,000	31.59	18.44	171.31
Total Pressers	190	17	4,969	330	39.87	22.01	181.14
Hand sewers, coat	54	104	371	4,103	42.03	23.14	181.63
Examiners, shop and stock room	91	47	417	208	36.12	10.97	212.84
Fitters and Trimmers,	79	19	233	83	45.84	20.24	226.48
Changes coat	85	7	243	33	46.53	20.02	232.41

<sup>1</sup>U. S. Bureau of Labor Statistics. Monthly Labor Review. Vol. 28, No. 1, January, 1929. p. 128-134.

<sup>2</sup>Only departments employing both men and women are listed in the table.

in industrial occupations are paid only a little more than half as much as men. The reason for the difference in pay is not obvious. Whether it is a matter of the amount of training, the extent of experience, the nature of the work, inherent physical differences, a matter of seniority or length of service, and the effect of a more rapid turnover among women workers, the economic and social status of woman, or whether it is due to traditional causes is not apparent. This particular question is a problem which merits scientific investigation and study.

Other phases of this problem which should be studied are: (1) the difference between the salaries of male and female college graduates in the industrial world; (2) the difference between the salaries of male and female business executives, and (3) the difference between the salaries of men and women teachers. In each of these cases it would seem that a classification as to training and experience should be made if the data is to be of value for comparative purposes. At the present writing it appears that no studies of this type have been made.

In a personal interview with the manager of the Commercial Department of the Ohio Bell Telephone Company, Columbus, Ohio, the writer obtained the only information, with regard to the salaries of male and female college graduates in industry, that he has been able to find to the present time. In fact, this single instance was the only one discovered in which any department of a large corporation employing both sexes had a personnel composed entirely of college graduates. Since the information in this one case may be of interest, it will be reported. We can merely conjecture as to its significance, but it is suggestive as to the value of further research.

Of the 25 employees in the commercial department, the manager stated that 8 were men and 17 were women. The average monthly salary, he said, was for the men \$275 and for the women \$125. The highest salary paid any of the men was \$375 per month and for the highest paid woman \$200 per month.

The point I wish to make is that a great difference exists between the salaries of men and women in industry. This does not necessarily mean that the same thing should be true of the salaries of teachers. In the teaching profession, the single salary schedule which makes little or no distinction between the sexes is in operation in many schools systems and is favored by many writers.7 Perhaps this is as it should be, and industry should adopt the single salary schedule which makes no salary schedule which makes no salary distinction between the sexes. It is my opinion that a nation-wide study of the salaries of men and women teachers would reveal that it is necessary for a man to forsake teaching and enter the administrative field in order to earn substantially more than a woman having the same amount of training and experience. Certainly it would be necessary if the men teachers desired to enjoy the benefits of the same ratio that exists between the salaries of men and women in industrial work.

When such conditions apparently exist in a large number of school systems of the country, there is little hope of increasing the number of men entering the teaching profession. So long

'National Education Association. "The Scheduling of Teachers' Salaries", Research Bulletin of the N. E. A. Vol. V, No. 3, May, 1927. p. 160-161.

as they continue it seems very doubtful whether the present ratio of men to women can be maintained. "The schools cannot hope to compete with other professions and with industry for the service of first-class men until they offer, to men, salaries attainable by men in other fields.

"Unless a community can afford to pay to all men and women, grade-school and high-school teachers alike such a salary, the single-salary scheme means the eventual elimination of men from the schools."

"A salary which is attractive to a single woman is not equally attractive to a married man with children. A salary which draws the very best women in the teaching profession may draw only the very poorest men. On the contrary a salary that is high enough to attract good quality men is sheer extravagance when applied to the salaries of single women."9

"Whatever a community may start out to do, it cannot long continue paying a fancy salary to nine women for the sake of getting one man. The result of equal pay is to drive all men out. They might as well be driven out at the start and given a chance to get other jobs before it is too late."10

"The following prominent educators have expressed themselves that inadequate pay is unfortunately driving men out of the schools: R. G. Jones, superintendent of schools, Cleveland; Eugene A. Nifenecker, assistant director of reference, research and statistics; Dr. Charles H. Levermore; Dr. Charles H. Judd; Dr. E. P. Cubberley; Dr. David Snedden; Dr. Thomas H. Briggs; Dr. E. S. Evenden; Dr. G. D. Strayer; Dr. Paul H. Hanus; and Dr. Lotus D. Coffman.

"The Men High School Teachers' Association. "A Critical Study of the Report of the Committee on the Study of Salaries in the Cincinnati Public Schools", The Ohio Teacher. Vol. XLVII, No. 7, March 1927. p. 294-297. "Yan Denburg, Joseph K., "New York Agrees with Cincinnati", The Ohio Teacher. Vol. XLVII, No. 7, March, 1927. p. 297.

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Ovan Denburg, Joseph K., "New York Agrees with Cincinnati", The Ohio Teacher, Vol. XLVII, No. 7, March, 1927. p. 297.



CHARLES L. BARR

CHARLES L. BARR

Assistant Supply Commissioner, St. Louis, Mo.

Mr. Barr was elected vice-president of the National Association of Public School Business Officials at the recent convention in Columbus in recognition of his long and outstanding service to the organization as assistant supply commissioner for the board of education of St. Louis. During the past 20 years Mr. Barr has had charge of the cafeterias and of an important part of the general management of purchasing for the city schools.

The public wants men teachers for its boys. We are confident that a referendum submitted to the people at any general election would show this conclusively, as it did in Boston."11

In an address before the Educational Research Association at the annual meeting of the Department of Superintendence in Cleveland, February, 1929, Dr. James R. McGaughy, professor of education at Teachers College, Columbia University, made the following significant statement:

"The major obstacle of scientific schedule making is now found in the state laws that make equal pay for men and women mandatory. We will not achieve salary schedules which are economically and scientifically sound until we learn to conduct salary campaigns on some basis other than demanding special privileges for our profession."12

So long as the present differences exist between the salaries of men and women in industry, it seems to the writer that, if we desire to put our salary schedules upon a "sound economical and scientific basis," we must establish similar differences between the salaries of men and women in the teaching profession.

A warning, with regard to the readjustment of our salary schedules, may be read in the following statement:

"Teaching not only offers no opportunity to earn the large incomes usually associated with first-rate success in other fields, it fails to offer an equal chance to earn the typical wage of the rank and file of the nation's workers. Less than one teaching position in three in the United States paid as much as \$1,600 in 1926. More than half of the nation's gainfully employed yearly earn more than this amount. Less than one teaching position in five pays as much as \$2,000 a year, which is the average income of the nation's gainfully occupied persons."13

It is obvious that any attempt to establish greater salary differences between men and women teachers must be made, not through any lowering of the salaries of women teachers, but entirely through increases in the salaries of men teachers.

<sup>11</sup>The Men High School Teachers' Association. "A Critical Study of the Report of the Committee on the Study of Salaries in the Cincinnati Public Schools", *The Ohio Teacher*. Vol. XLVII, No. 7, March, 1927. p. 294-297.

<sup>12</sup>McGaughy, James R. "Scientific Salary Schedule", *The Gist of the Cleveland Meeting*. Vol. IV. No. 2, Feb. 27, 1929, p. 4.

<sup>13</sup>National Education Association. "The Scheduling of Teachers' Salaries", *Research Bulletin of N. E. A.*, Vol. V, No. 3, May, 1927. p. 156.

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Criticizes equal salaries for men and women; also de-

Criticizes equal salaries for men and women; also de-plores use of political methods of securing higher sala-ries for teachers.

National Education Association, "Practices Affecting Teacher Personnel", Research Bulletin of N. E. A. Vol. VI, No. 4, September 1928. p. 246.

Shows that definite rules with regard to the salaries of men and women teachers are seldom adopted; large cities make no difference.

National Education Association. "The Scheduling of eachers' Salaries', Research Bulletin of N. E. A. Vol. No. 3, May, 1927. p. 190.

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The Men High School Teachers Association. "A Critical Study of the Report of the Committee on the Study of Salaries in the Cincinnati Public Schools", The Ohio Teacher. Vol. XLVII, No. 7, March, 1927. p. 294-297. United States Bureau of Education. Bulletin, 1928, No. 25. p. 274.

Statistical summary of elementary and secondary schools combined, 1870 to 1926. Gives ratio of men to women teachers.

women teachers.

United States Bureau of Labor Statistics. Monthly Labor Review. Vol. 26: No. 3, p. 123-133; No. 4, p. 104-118. Vol. 27: No. 3, p. 138-148; No. 4, p. 89-95; No. 5, p. 120-130, 131-137; No. 6, p. 179-188. Vol. 28: No. 1, p.128-134, 136-137; No. 4, p. 143-153.

Gives salaries of male and female workers in various occupations; also reports employment statistics, labor turnover, etc.

Van Denburg, Joseph K., "New York Agrees with Cincinnati", *The Ohio Teacher*. Vol. XLVII, No. 7, March, 1927. p. 297.

Gives disadvantages of equal salaries for men and omen teachers.

## Has the School-Goods Manufacturer Kept Faith with Education?

J. W. McClinton, Chicago, Ill.

Progress in education has been twofold, (1) better methods of instruction, better organization of instructional material, and the better and richer curricular content; (2) more and better tools for carrying out instructional schemes, school plants better adapted for educational needs and usage, and more suitable and more adaptable school supplies and equipment. Much and frequent discussion has centered around Item 1, but changes in Item 2 have gone unnoticed for the most part, or at least have not been sufficiently stressed. Because of this languid attitude, it may be necessary to observe that there has been as great a change in the physical as in the purely educational aspect of the school system.

Not what can be made and then try to sell it, but what is wanted and then make it, has been a slogan of the progressives in the school industry.

The school industry as a group has for years been studying both actual and needed educational changes: actual as those having taken place, and needed as those advocated by national authorities on educational problems; the first to meet a present need, the second to be ready for any anticipated demand. They have gone to the educator for counsel and advice; they have gone to the classroom for observation, study, and investigation. They have gone to the health clinic and health authorities to know how to better serve the physical needs of the child. They have gone to the educational conferences to sense the trends and interpret the signs. They have held conferences within their own groups and exchanged ideas, experiences, and experimentations. They have called into these conferences leaders in education that they, their fellow competitors, the buyers, and most important, the child, might gain thereby.

Factory representation and salesmen in the industry are more and more being recruited from educationally trained sources, and these people are constantly better preparing themselves for their task through study and instruction. Many colleges and universities in their departments of education are including courses to afford salesmen an opportunity for training and a broader vision of their task. The records show that they are taking advantage of it. There are other sources of training equally important. Salesmen go to the factory to learn the process of manufacture, the quality, use and adaptation of the goods they are to sell, and they supplement this with educational courses in the factory or selling organizations to gain the educational viewpoint. Shoulder to shoulder with the superintendent and the business manager, both of whom they serve, they study these problems where all have common interests.

#### **Changing Personnel in Industry**

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Changes in requirements of school executives have been rapid and marked. The executive was formerly an educator, but now he is an educator, an administrator, and a business man. A similar change has taken place in the personnel of the industry. Thus we see that those representing the educational training and those representing the supplies and equipment which make possible the educational progress are meeting over the conference table where each is doing his part. This team-play produces a service, a serviceableness of products, and a degree of satisfaction and confidence that could be attained in no other

The educator and the industry view with satisfaction the changes which progress has prompted. There still lingers within the memory of most of us the old double desk, the slate and pencil. the stinging pointers, the stereotyped and much repeated readers, the "heap much heat" heating stoves, the wooden pail with the frequently

Can an industry reform itself? The school sup-ply industry has in the past ten years effected many real reforms which has redounded to the benefit of schools and of education in general. The present paper by the secretary of the national trade association of the industry deserves the careful attention of all school authorities engaged in the purchase or use of teaching materials, school equipment and supplies.—The Editor. 

lipped drinking cup, the occasional microscopic map, the motto copy penmanship book; the entire absence of recitation chairs, of library facilities, of kindergartens, of art, and music. Through organized industry we can now find pupils' seatings in conformity with the demands of health, comfort, usefulness, and durability. The blackboard, dustless chalk, and erasers have supplanted the slate, pencil, and the shirt-sleeve cleaners; sanitary drinking fountains with pure sparkling water have supplanted the open pail with its water plus dust accumulations and the contaminated community drinking cup. We have our scientific systems of heating and ventilating with temperature and moisture-content control for our larger buildings and the equally efficient hooded heating and ventilating systems for our smaller units. Wearisome standing recitation periods are now spent in comfortable recitation chairs or desks, and the consequent relaxation brings about a happier atmosphere, a greater concentration, and a more ready pupil response. Variety of subject matter and methods of instruction, supplemented with various types of

tion and health, as well as education.

supplies for motivating purposes have followed

the innovation of the kindergarten up through

the correlated subject matter for all grades in-

volving all contacts that produce culture, recrea-

Scrapping Old Machinery Looking back over these records of changes and accomplishments, one may reasonably claim that the school industry has asserted leadership and demonstrated a spirit of progressiveness in that it has been able and ready to keep pace with these rapid and varied changes. It has meant the scrapping of old machinery and the developing of new, the discarding of old lines and the creation of new, the dropping of old policies and the adoption of new. It has required not only a change of product, but also the change in organization personnel for the distribution of the product. The seller needs know the quality of the product but of more importance its educational value. The salesman must be a student of educational needs. Much of this is acquired from the educator, and if the salesman represents a progressive manufacturing line or an alert and progressive distributing agency, he has acquired much from these sources also.

Within, the school supply industry has set a high ideal for business conduct and has witnessed the advance of business ethics toward those ideals. The teaching business has become a profession and has brought with it a longer tenure of office and a resulting greater degree of permanency. Likewise, the school supply and equipment industry has grown. It has become an industry, the backbone of which is the reputable manufacturer and distributor.

Because of the rapidly increasing enrollment in our schools, building programs have been both frequent and extensive. They have been so complicated that they have called for business ability in the school executive not formerly recognized or required. In his breadth of business judgment he has been quick to consult, has been discriminating in his contacts, and has been ready to recognize that responsible representatives of the school industry on the other side of his program have something constructive to contribute, and the progressive superintendent has welcomed the

contribution. Attention in this connection is called to the extensive exhibits which manufacturers have made of their products at the Department of Superintendence conventions and the yearly increase in attendance at those conventions by school officials who consider these exhibits a valuable asset to the knowledge and background for educational direction. They have noted with increasing satisfaction the strong indorsements of the schoolmen as to the educa-tional value of these exhibits. The same policy as to exhibits is in evidence on a smaller scale in state educational gatherings, in business, art, industrial, and allied conferences.

Ethical and Unethical Practices

The millennium in educational leadership has not and may not arrive. Many years in the superintendency field leads the writer to conclude that in ethical attitude, in devotion and service to a cause, the educational group have an exceptionally high rating. Even in the educational field there are sufficient instances of unethical practices, however, to remind us that in all lines of endeavor there are those who do not play the

Unsportsmanship may doubtless be found in the school industry. The preponderance of the feeling within is that it should not be. There is a concerted action as an industry to safeguard its reputation, to establish and maintain high standards of business practices, to conserve confidence, and to render merited service.

There is an abundance of educational leadership to meet all educational needs without boards of education being forced to employ any educator who does not have high ideals and a high professional standing. There are a sufficient number of school-supply and distributor agencies of high responsibility financially, who have the strongest conception of ethical standards and practices both with respect to competitor and purchaser, who have background and experience coupled with a desire to serve well the school buyer, so that it is never necessary for the boards of education, the school superintendent or the business manager to do business with any representative of the school industry who may be off-color in business practices.

As great as has been the change in the methods of manufacture, service, and distribution, as great as have been the changes in production conforming to new school needs, as extensive as have been the research and investigations to determine school needs and then conform to them, still greater is the desire on the part of the industry to set high standards for business conduct and the advancement and promotion of business ethics toward those standards. The national organization of the school-goods trade, the National School Supply Association, has dedicated its efforts to that end. The cooperation of the buyer with the association effort and the insistance of the buyer on high standards of business conduct on the part of the seller, and a fair recognition of those standards by the buyer, has built a better industry and has resulted in better service to the school children.

Manufacturers within the industry are anxious to conduct their business from the viewpoint of the educational angle as well as the business angle, to see their business from without as well as within, to check their products against needs and trends. In order to accomplish that end, they are bringing into their business from the educational field, educational advisers or business counselors. Many a manufacturer in the school field has thus invested his money; he has also invested the time of company officials in a discussion of business policies, of analysis of products, of merchandising procedure, that business practices will team in with educational needs. Many an educator is serving individual concerns in the school supply and equipment industry as business counselor.

Scrutinizing Public Expenditures

The supposition that industry is indifferent to the cost of goods is without foundation. Competitive conditions have not dictated this attitude. As a group, they are appreciative of the fact that the expenditure of public money is closely scrutinized. They are aware of the diminishing purchasing spread of the dollar, and they are concerned to render the greatest service in conformity with the ability of the district to buy. They are mindful that there are ways and means of reducing costs and thus passing on to the purchaser the advantage either in better grade of goods for the same money or the same grade of of goods for less money.

At the present time there is a movement on the part of the manufacturers of school equipment to standardize on color finishes of wood products. Appreciative of the fact that there must be a certain harmony in the various finishes of school equipment going into the school building, also knowing that competitive conditions in local school requirements necessitate boards of education letting contracts to several manufacturing lines rather than to one, and having first-hand knowledge of the expense of special color finishes in order to match furniture, and aware of the lack of service the special color finishes cause, these manufacturers met of their own initiative and by cooperative action recommended a standard color finish for school equipment. This action will mean changing of formula, disposing of accumulated stock in other color finishes, a change in production, new changes in their finishing departments, new experimentation in finishing materials, and the added necessity of meeting a certification program. In spite of these obstacles, and concerned with the more harmonious arrangement in school equipment, the lessening of costs through the elimination of special finishes, the speeding up of delivery and the consequent better service through the stocking of standard finishes, these manufacturers whole-heartedly have joined in the movement. This demand did not come from the educational group. It was sensed by the industry, its advantages and disadvantages analyzed, and, when it seemed constructive, the industry called upon the United States department of commerce to cooperate with them in effecting the program.

#### Trade Recognizing Educational Program

Has the trade a place in the arrangement of the educational program? William Feather says that when he buys an automobile he wants to deal with a man who is dependent upon selling automobiles for a living. He wants to deal with a man who knows automobiles and who, for the sake of the single sale, cannot afford to deceive anyone. The profit he pays the reliable and experienced dealer is small compared to the risk

that he would incur if he attempted to negotiate a trade without the dealers expert knowledge.

A nationally known educator recently gave expression to almost the same sentiments when he said, "The school industry and the superintendents are one in working together to produce better and finer children for America, and we join hands with you in this one common purpose and pledge ourselves that the doors of all superintendents of the country shall be opened to those who produce furniture that you may come in and tell us the things you have to produce and sell, that it may be better for the children. You shall always be welcome when you bring to our attention the things that we ought to have, based on its merit, upon its use to the children; but the doors shall be forever barred against any man or woman who attempts to influence any superintendent or teacher of this country to any unworthy means."

The representatives of the school industry heartily concur and are willing to join hands with the educational group in meeting the challenge in the closing sentence by the educator. Individual concerns in the school industry who insist on holding to old customs, to old forms of equipment and supplies, to unsavory methods in business conduct, either with respect to competitor or purchaser, go and go rapidly. This weeding-out process is wholesome both for the

schools and the industry.

Cooperation of Educator and Industry Another source of cooperation between the educator and the industry is in the field of research. In some of the larger manufacturing organizations will be found large groups of educational specialists at work. Every type of product must meet the acid test of educational value and usage as applied by these groups. No one type of research is typical, each line presents its own problems. In addition to individual company research, there has been industry or group research through the agency of the National School Supply Association. Its activities are general rather than specific and represents the group contribution to industrial and education-

al progress The results of the research effected by any one manufacturer in the industry in a sense become the property of all competitive lines. An improvement in products of any manufacturer means an improvement in the competitors' products. Thus a manufacturer through research activities not only improves conditions for the school child through improvement in his own line of manufacture, but improvement in in-

dustry conditions in general.

There is no longer a "No Man's Land" between responsible competing manufacturers in the school supply and equipment field nor is there between the school industry on the one hand and the educator on the other. The progressives in the school industry have kept faith with edubances. Through me, as a third party long ago deadened to reprisals, the following facts are reported:

Some Typical Cases

The class consisted of men and women almost all of whom have had several years in the field which the course was advertised to illuminate. Several were experienced teachers, Some were school principals, old to the field, while others were just starting the work in their home schools. Some were city-wide supervisors. They represented, therefore, a very considerable field of experience and presumably a very considerable amount of thinking. Yet not once did this professor, who himself has never taught in this field or supervised a school where the subjects under review were taught, ask one question for the purpose of bringing out any actual experience of his audience.

Moreover he never welcomed any statement of experience when it was volunteered. On the contrary he created such an atmosphere of timidity and fear that over nine tenths of the class

never said a word.

A teacher from a small city who was giving a year and \$1,200 to entitle herself to \$100 more a year on her home schedule, irritated him by asking a question of practical importance to her home work. He begged her not to bring "smalltown problems" to his class!

After the third week the professor started going round in circles, just making talk. Nothing was accomplished in the fourth to sixteenth sessions, except to "peter out" by degrees.

He didn't learn the names of his students and with negligible exceptions was never able to call any student by name even with the aid of his register chart. Because he went around in circles and because he showed no interest in the local problems of his class his teacher-students naturally ran out of real questions early and began to make up questions which they thought would appeal to his facetious humor. Instead of the laboratory course which he promised, he gave a dodging course, and disposed of question after question by saying, "I disagree entirely."

#### The Effect of the Instructor's Attitude

He made fun of personalities, in fact he admitted being "insulting" at times for the reason that an insulting manner seemed to him to bring out qualities of independence and initiative. As part of these tactics he purposely misconstrued questions. Unfortunately the net effect on the class was not to stimulate inquiry and foster independence and thoughtfulness, but to shut them up like clams.

Although most of them had started the course in sincere expectation of practical assistance and abiding inspiration, they quickly relapsed into a mood of indifference and cynicism. They were at least going to make sure of the points for which they had paid and of the salary increments which trusting school boards and superintendents dangled before them as a reward for taking this course

Up to the sixteenth week he had never mentioned two of the most important problems advertised in the catalog as due for laboratory treatment in his course.

So the story goes. There is hardly a superintendent in the country who cannot tell fifty others just like it or worse. Yet, these same superintendents keep right on playing up to a fetish which they know is making it harder and harder to interest boards of education and teachers themselves in supervision that first distinguishes wasteful teaching from profitable teaching and then goes to work skillfully and exactingly to eliminate the wasteful teaching or to eliminate the teacher.

It would be bad enough if there were no penalty for this fetish, except the waste of scores of millions of dollars a year. Unfortunately this money waste is but a small part of the damage done. Children are suffering, communities are

(Concluded on Page 142)

## The Fetish of Courses for Teachers

Wm. H. Allen, New York, N. Y.

It is rather appalling that the decade of scientific tests and measurements is also the decade of teacher stampedes for college "credits."

Even more appalling is the realization that the very same pedagogical leaders are responsible for both phenomena. Teachers by the tens of thousands have been compelled to take lectures on the folly and waste of instruction for unwilling minds. Taken from laboratories they have paid for talk about the laboratory method.

There seems no end to the complusion or the waste unless the victims tell the world just what it is they are getting from these college courses for lectures, and unless school boards learn what they are getting in return for their money premiums upon "credits."

One superintendent is making an initial con-

tribution from the testimony of a teacher who took a graduate course last year with one of the most famous university teachers of teachers, reputed to be one of the most highly paid professors in America.

The teacher-student has not only paid her fee, but has had to make many sacrifices in order to attend his course in her subject. The superintendent vouches for her desire to learn new methods and new ideas. She is attentive, studious, earnest, practical, and quick to apply help from outside not only for her own immediate work, but for her whole school system.

He does not sign his own name or reveal the reporting teacher's name because he is afraid of reprisals from the individual professor and the university whose reputation that professor en-

# State Systems of Taxation for Public Schools-V The Massachusetts Plan

Fletcher Harper Swift, Professor of Education, University of California

Quest for New Sources of Public Revenue. The evils universally and inevitably attending the general property tax, the need for greatly increased public revenue and an increasing appreciation of the principles of sound taxation are some of the most important causes which have led to a quest for new sources of school revenue and to the creation of certain new types of taxes. To the three causes just named, must be added certain far-reaching social and economic changes. The tendency of our national industrial life away from what were once almost exclusively agricultural occupations to an industrial life in which an increasingly large proportion of activities are devoted to manufacturing and commerce, has brought about a transformation in the character and the form of property and wealth. Formerly, wealth was represented almost entirely by real and personal property; today wealth and property are largely corporate and many forms of income derived from sources other than tangible property can be made to contribute their just quota to public expenditures only by means of some special form of taxation. Possession of real or personal property is in many cases no longer the truest index of ability or obligation to support governmental undertakings. Frequently a much truer index of ability and obligation is the possession of income whether received as a salary or derived from intangible property such as stock and bonds. Such is the situation which is leading our states to give more and more serious attention to the possibility of adopting new types of taxation. Of these, none is more significant nor more promising than the income tax. The Louisiana Tax Commission, in a recent report, wrote as follows: "The income tax is the most defensible of all forms of taxation, because it compels no one to pay who has not the means to pay. It is the least transferable of all tax burdens. It is not easily shifted, as many other tax devices are.

The movement toward the adoption of the income tax as a source of state revenue, which appeared to be well under way, was undoubtedly given a distinct set-back by the Federal Act of 1913 which provided for a Federal income tax, and by the subsequent Federal Acts of 1916. 1917, and 1918 which increased the Federal rates. Nevertheless, it should be noted that it was after the Federal Government had entered upon the policy of levying income taxes that at least three states, Massachusetts in 1916, North Carolina in 1920, and Arkansas in 1923, provided for the levying of state income taxes and one state, Mississippi, revised and greatly increased her rates.

In 1923, Witte made the following classification of states levying income taxes:

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a) Combined personal and corporation income tax: Mississippi, Missouri, North Carolina, North Dakota, Oregon (repealed, 1923) Virginia, Wisconsin, South Carolina.

b) Personal income-tax laws and distinct corporation income tax: Massachusetts and New

c) Personal income-tax laws, but no corporation income tax: Arkansas (repealed, 1925), Delaware, Oklahoma.

d) Corporation income-tax laws, but no personal income tax: Connecticut, Montana, Tennessee (several other states tax special kinds of corporations on the income basis, but not general business corporations).

This is the fifth and last of a series of articles on state systems of taxation for public schools to be contributed to the JOURNAL by Professor Swift. The preceding articles appeared in the March, April, May, and June issues of the JOURNAL. The author wishes to express his indebtedness to Mr. A. B. Lord, of the Massachusetts State Department of Education, who read and approved without change the original manuscript upon which the present article is based.

Two states, Arkansas and Oregon, have repealed their income-tax laws since Witte made his summary, leaving 14 states which are reported to be levying income taxes at the present time. Seven of these 14, namely, Delaware, Massachusetts, Mississippi, Missouri, New York, North Carolina and Wisconsin, employ all or portion of the proceeds of their respective state income taxes as sources of school revenue. Of these 7 states only 4, Delaware, Massachusetts, Missouri and Wisconsin give the schools a definite claim on all or a portion of the proceeds. However, in Mississippi and North Carolina, the present income-tax system was inaugurated with the definite purpose of providing school revenue, and New York, by her method of distributing the proceeds, makes it possible for a certain portion of the same to be devoted to schools

No small degree of interest must attach to the policies of Massachusetts, that state which it appears was the first to employ the income tax as a definite device for providing school revenue. Other states, notably Delaware and Wisconsin, have gone farther in using the income tax as a source of state school support. Nevertheless, Massachusetts remains the pioneer experimenter in this policy. This fact, coupled with the long and justly deserved reputation which this state has enjoyed, as one of the foremost and most courageous pioneers in all progressive educational policies, justifies a careful consideration of her system of state taxation for public schools, and explains further why her plan has been selected as the one with which to conclude the present series of articles on state taxation for public schools.

#### State Sources of School Revenue

State taxes provide for public elementary and secondary schools in Massachusetts through the channels of two different funds: (1) the general school fund derived entirely from the proceeds of the state income tax; (2) the state general fund composed chiefly of tax proceeds, from which are paid annual legislative appropriations for special school purposes and projects. A study of state taxes for public schools in Massachusetts resolves itself, therefore, into a consideration of (1) the state income tax, (2) state taxes contributing to the general fund and which are, therefore, indirect sources of state school revenues, and (3) a comparison of the relative importance of the general school fund, state school appropriations, and the only remaining state source, namely, the income of the state permanent public-school fund, officially known as Massachusetts school fund. In order to prepare at the outset for an understanding and appreciation of the relative importance of these three major classes of revenue, Table I is presented. This table shows the three funds, or classes of funds, from which state school revenues are derived, the amount contributed by each during the year 1926, and the per cent which each such amount was of the total state aid for that year.

TABLE Source Analysis of Massachusetts St
Public Schools, 1926
Amount Source
State income tax (general school fund)<sup>3</sup>
Appropriations from ordinary revenue or general fund<sup>3</sup>
Massachusett setts State Aid for Per cent1 \$4,833.080.34 63.3 2,586,454.36 sachusetts (perma-ent) school fund 210.744.37 2.8

From Table I three things are evident: (1) The income of the Massachusetts school fund is

of relatively negligible importance as a source of state school aid. (2) Appropriations are sufficiently important to necessitate a consideration of the taxes contributing to the state general fund from which such appropriations are paid. (3) The state income tax is by far the most important of all sources of state aid, contributing, in 1926, only slightly less than two thirds of the total state-provided school revenues. This, it will be observed, is the only state tax on which the schools have a legal claim.

#### Taxes on Which Schools Have Legal Claim

State income tax devoted to general school fund. In 1916 Massachusetts passed her incometax law.<sup>2</sup> Three years later, namely, 1919, the state provided for setting aside a portion of the proceeds of this tax to constitute a new annual current school fund, officially known as the general school fund. The creation of the general school fund was the direct outgrowth of the recommendation of the Special Commission of Education appointed by the governor under the authority of chapter 88 of the Resolves of 1918:

The commission prepared two bills. The General Court, in 1919, combined these two bills into a single law.3 This act characterized as "the most important educational bill that has been before the legislature in twenty years," is divided into two parts. Part I, consisting of sections 1-7, provides for the creation and disbursement of the general school fund. Part II, consisting of sections 8-17, provides for the perpetuation of the Massachusetts school fund and a new method of disbursing its income, together with sufficient additional moneys from the proceeds of the state income tax (not to exceed \$250,000 annually) as may be necessary to pay in full the claims against the income of the Massachusetts school fund.

This act constitutes chapter 70 of the General Laws. Certain sections of the act were amended in 1921 and subsequent years, including 1926.

The general school fund is not a fixed amount, but rather a sum to be set aside annually from the proceeds of the income tax, sufficient to provide for the purposes set forth in Part I of the act, and which shall be available without further legislative action.4

It has already been noted that the proceeds of the state income tax, in accordance with the provisions of the law, may be used not only to meet the claims against the general school fund, but to supplement the income of the Massachusetts school fund, if necessary. The total proceeds of the state income tax, in 1926, amounted to \$21,-193,106.05.5 Of this total 22.8 per cent, namely, \$4,833,080.34 was devoted to the general school fund.6 No portion of the proceeds were required to supplement the income of the Massachusetts school fund.7

Any portion of the proceeds of the state income tax not required to meet the state's obligations to schools, is returned to the cities and towns in proportion to the amount of the state general property tax imposed upon each of them respectively in each year. In 1921 no less than 64 per cent was returned,8 and in 1926 no less than 77.4 per cent. The proceeds received by the cities and towns are paid into the general treasury of each, with the result that a considerable proportion of the proceeds thus returned eventu-

Laws of Massachusetts, 1916, ch. 269.

\*Massachusetts General Acts. 1919, ch. 363

\*Massachusetts General School Laws, Relating to Education, 1927, p. 11, ch. 70, sec. 1.

\*Commisioner of Corporations and Taxations, Annual Massachusetts Department of Education, Annual Report, 1926, Part I, page 66.

Report, 1926, p. 74.

\*Ibid.

\*Formerly the quotas returned to the towns were in direct proportion to the proceeds of the income tax collected within each.

TABLE II
Massachusetts State School Appropriation from the State General Fund or Revenue, 1926,

	Expenditures	and Balance <sup>1</sup>		
	ITEM	Appropriation <sup>2</sup>	Expenditure	Balance
I.	For State Department of Education	- PPP		
-	Salaries and Personal Services	\$ 94,000.00	\$ 93,671.80	\$ 328.20
	Travel		7,752.64	1.776.17
	Incidentals		14,670.10	977.68
	School registers and blanks	3.799.88	2,535.06	1,264.82
	Sight and hearing tests		139.47	660.53
II.	Local Administration and Supervision	300.00	200111	000.00
	Superintendency unions	105.788.67	103.389.06	2.399.61
III.	Vocational Education	100,100.01	200,000.00	2,000,00
	Independent Industrial Schools	1.260,669.07	1.260,659.31	9.76
	Teachers of vocational education		53,330.09	2.924.42
IV.	Tuition and Transportation of High School Pupils	20,010.10	00,000.00	_,
	Tuition	186,773,39	184.048.52	2,724.87
	Transportation		164.923.37	1.124.19
	Wards of the state		165,000,004	411111111111111111111111111111111111111
	Paroled juveniles		200,000,00	
V.		14,000.00	14.000.00	***************************************
VI.		11,000.00	11,000,00	
	Teachers' Retirement Board			
	Personal services and contingent expense	10.800.00	10.790.51	9.49
	Teachers' pension reimbursement to cities and towns		108,783.01	***************************************
	Pensions to teachers	411,000.00	409,219.60	1,780.40
	Total	\$2 586 454 36	\$2 592 912 54	\$15,980,14

Table, the purpose of the state income tax and from the income tax and from th <sup>3</sup>Massachusetts
division of child guarda...
division of child guarda...
sequently they do not appear in the app...
Annual Report.

4It is not clear that this entire amount was expended.

TAB

Massachusetts Cor

TABLE III
Massachusetts Corporation Taxes, 1926

Title of Tax		Da	te and	Ba	sis of Lev.	y		
siness Corporations								
orporation tax Excise	based	upon	value	of	corporate	excess	and	upe

Business Corporations	Trace and Dasis of Devy
	Excise based upon value of corporate excess and upor
Waster by Issue seemster to	net income.
Foreign business corporation tax	Excise based upon the value of corporate excess and upon net income.
Special tax on income of corporations, domestic and	net income.

foreign, 1920.

Extra tax on income of corporations, domestic and foreign, 1921. ..... of 1 per cent, tax based upon net income. . ... of 1 per cent, based upon net income.

... of 1 per cent, based on average deposits.

Savings-bank deposit tax
Massachusetts Hospital Life Insurance Company deposit tax.
Saving departments of trust companies deposit tax.
National-bank tax ... of 1 per cent, based on deposits.
... of 1 per cent, based on average deposits.
... Measured by net income; rate determined by Commissioner.
... Measured by net income; rate determined by Commissioner.
... Franchise taxes, based upon the value of the capital stock.

Trust-company tax .. Public-service corporations.....

Stock-transfer tax .

ally reaches the public schools through appropriations from city and town treasury.9

#### Tax Revenues Devoted to Schools Through State Appropriations

Appropriations from state ordinary revenue. The general court makes annual appropriations from the state ordinary revenue for specific purposes benefiting the public schools. Table II presents an outline of such funds, provided for 1926, showing the amount provided for each such purpose, including the balance from the preceding year, the expenditures from each such amount, and the balance remaining at the close of the fiscal year.

In Table I it was shown that 33.9 per cent of the total state aid for public schools for the year 1926 was provided by the appropriations from the state general fund, which have been presented in Table II. In this same year, no less than 82.6 per cent of the state ordinary revenue, that is, the state general fund, was derived from the proceeds of three types of taxes, namely, general property taxes, corporation taxes and inheritance taxes, each of which will now be considered.

Direct or general property tax. In order to cover any deficit which cannot be met from moneys derived from all other state sources of revenue, Massachusetts provides for the imposition of a general property tax upon the towns and cities of the state. This general property tax is distributed or apportioned among the cities and towns of the state on the basis of their respective assessed valuation, in accordance with chapter 58 of the General Laws.10

See F. H. Swift, Public School Finance in Massachusetts, Studies in Public School Finance, The East, p. 29.
 Massachusetts Commissioner of Corporations and Taxation, Annual Report, 1924, p. 35.

As will be seen from Table IV, in 1926 the general property tax furnished 35.5 per cent of the total ordinary revenue receipts.

Corporation taxes. Corporation taxes furnished approximately 28 per cent of the ordinary revenue receipts in Massachusetts during the year 1926 (see Table IV).

Corporations are taxed on various bases. Table III presents, in outline form, the corporation taxes levied for 1926, showing the types of taxes levied upon the different corporations and the

rate and basis of levy of each type of tax.

Inheritance taxes. The state levies and collects graduated inheritance taxes upon the property of deceased persons, the rates varying from 1 to 12 per cent on all amounts in excess of exemptions allowed by law, depending on the amount of the inheritance and the relationship of the

The present account may well close with Table IV which presents a source analysis of Massachusetts ordinary revenue receipts, showing the amount received from each source for 1926 and the per cent which each such amount was of the total ordinary revenue receipts for the same year.

Source Analysis of Massa Receip		y Revenue
Source	Amount	Per cent <sup>2</sup>
Direct or general property tax³ Corporation taxes Inheritance taxes	$\$12,000,073.89 \\ 9,436,071.07 \\ 6,495,566.80$	$35.5 \\ 27.9 \\ 19.2$
Total receipts from taxes	27,931,711.76	82.6
Departmental receipts Interest Miscellaneous receipts	$\substack{5,495,399.87\\319,547.08\\55,191.32}$	$\begin{array}{c} 16.3 \\ 0.9 \\ 0.2 \end{array}$

#### Conclusion

Taxes as sources of state school revenue. Comparing the data presented in Tables II and IV and the preceding paragraphs, it is evident that state taxes are the chief source of state aid for public schools in Massachusetts. The only tax contributing directly to the support of schools is the state income tax which, as already noted, in 1926 provided more than 63 per cent of the total state aid. Approximately 34 per cent of state aid was furnished in the form of appropriations paid from the general revenue fund. As much as 83 per cent of this fund was derived from the proceeds of state taxes, which, arranged in the order of their importance, are as follows:

General property tax, 35.5 per cent Corporation taxes, 27.9 per cent 19.2 per cent Inheritance taxes,

The situation thus discovered in Massachusetts supports the writer's contention presented not only in the present series of articles, but elsewhere, that the states must look more and more to some form of taxation as a source of state-provided public-school revenues. Although in Massachusetts the state has always played a relatively small part in the provision of school revenues, the principles given recognition in many features of her system of taxation are worthy of consideration.

<sup>11</sup>Bureau of the Census, Digest of State Laws Relating to Taxation and Revenue, 1922, p. 182.

## A Comparison of Prices Paid by Central Purchasing and Individual District Buying for School Supplies

A. H. Shipley, Fresno County, California

The purpose of this study is to show a comparison between the purchasing plan through a central agent, and the local buying of the individual school districts.

In the years previous to 1927-28 the buying of school supplies had been done by each district in Fresno county, California. Beginning in 1928, a purchasing agency has been established, and all districts in the county are required to supply their schools through this purchasing department.

The plan of the investigation in general was to compare the actual prices paid by each district with those paid by the purchasing agent

There being 147 active districts in Fresno county, a group of 30 representative districts were selected throughout the county consisting

of large, average, and small districts. Having thus selected a large enough sampling of the districts, it was felt that the trend of costs in the entire county might be ascertained.

A list of thirty articles of standard school supplies was used in investigating the prices paid by each individual district. The prices were then compared to those being paid by the purchasing department to determine the influence of the creation of the central department upon prices of supplies obtained.

The invoices of materials from each district, which are filed in the county offices, were used in determining the prices for each of the thirty articles in each district. The average prices represented in the accompanying table (see page 147) were compared with 1928 prices. The table

(Continued on Page 142)

# The Selection of Sites for School Buildings

School Business Administration — Article III. Continued

George F. Womrath, Minneapolis

6. Derivation of School Population Indices, Present and Future

A school population index may be defined as the average number of school children of any one school type (elementary, junior high, senior high, etc.) which a given unit of area of any type (business, industrial, residential, apartment, etc.) will produce when that area is fully developed, as judged by the average number of children produced by equivalent fully developed areas of the same type of occupancy.

The index of a given area being known for each school type (elementary, junior high, senior high, etc.), it is only necessary to divide the adopted standard maximum population for each school type by its index, and the quotient will be the number of units of area that will be required to fill each building of each school type, or, the number of area units that will be served by each school type. Thereafter, it is only a matter of locating the school buildings as near the center of the respective areas they will serve as possible, in order that the maximum walking distance adopted by the board will not be exceeded. However, if the density of population is so great that a small area will produce the maximum number of children for any school type, then the sites should be located so that walking distances will be equidistant from corresponding points within each district.

While there are many factors attending the selection of a school site, such as maximum size of building, maximum walking distances, size of site, location, environment, drainage, nature of soil, accessibility, etc., all of which should have careful consideration, there are only two factors that are axial, namely, the size of the building and the walking distance.

A new factor, known as the population index, has recently entered into the problem of site selection and tends to become the most important of all factors in the determination of the proper and exact geographical location of school sites, because it governs the application of the other two axial factors, and determines:

a) The number of sites for each building type that should be provided;

The size of site to be provided for each building type; and

c) The location of each site for each type of

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A RESIDENTIAL DISTRICT PARTLY OCCUPIED AND SHOWING NATURAL BARRIERS, 1. BURROUGHS SCHOOL, 2. FULTON SCHOOL, and 3. LAKE HARRIET SCHOOL.

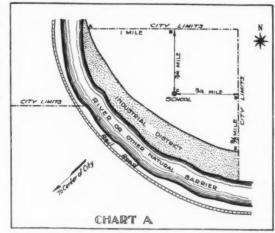
When school population indices are known, an accurate prognostication of school population for any part of a school district may be made, even before a single school child is in the district.

Next to a definite educational policy, the most important factor involved in the selection of a schoolhouse site is that of density of school population, from which school population indices may be computed.

School population indices influence, to a very large extent, the actual size of buildings, walking distances, and number of school buildings to be erected. However, it would be manifestly poor policy for a small community to build two small schools if the school population could be housed in one large building, even if the number of children in this building exceeded by a considerable number the desirable maximum. Nor, would it be wise to build two small schools, if one large building would accommodate all the school population, even if some of the children have to walk more than the desirable maximum distance.

In communities requiring several school buildings to house the school population, school population indices are indispensable, if the locating of school sites is to be done on a scientific basis. A satisfactory procedure in the determination of school population indices is as follows

a) Survey to ascertain area of every block in the



ILLUSTRATING THE METHOD OF ESTIMATING TRAVEL DISTANCES FOR PUPILS IN A DISTRICT HAVING A NATURAL BARRIER AND AN INDUSTRIAL DISTRICT

city or school district. (Chart A)

b) Area maps or cards showing present area occupancy, namely, the use of area, whether residential, apartment house, mansions, light commercial, industrial or heavy commercial, parks, public playgrounds, or vacant. (Chart B)

grounds, or vacant. (Chart B)

c) Area maps or cards showing future area occupancy. This includes a study of past and future population trends, home developments, street car lines, arterial thoroughfares, and other factors. (Chart C)

d) Child location maps, with children spotted for each type of school, such as elementary, junior high, senior high, etc. (Chart D)

e) Adoption of a unit area of measure; usually 100,000 sq. ft.

f) Work sheet of all area by blocks, showing area occupancy (residential, apartment, business, industrial, etc.) and school population occupancy or number of children of each school type (elementary, junior high, senior high, etc.) resident in each type of area.



A SCHOOL DISTRICT SHOWING 80 PER CENT RESIDENTIAL SATURATION. 1.



ILLUSTRATION SHOWING ISOLATED SCHOOL DISTRICT SCHOOL NO. 2 COMPLETELY SURROUNDED BY RAILROADS, MILLING DISTRICT, AND STATE UNIVERSITY PLANT. OCCUPANCY TRENDS CLEARLY SHOWN

g) Use work sheets to compute the average number of school children that will be produced for each school type from any section of the district, and from any type of area when saturated. These numbers for each school type area the school repulation bers for each school type are the school population indices. The indices will vary for different parts of the school district according to the different types of area occupancy.

h) Use work sheets and maps to compute area

required to produce the standard maximum number of children for each type of building.

i) Use work sheets to determine relation between

maximum size of building and maximum walking distance in each school district for each type of

j) Use of aerial photographs as an aid in visualizing city area occupancy.
 When working out the area occupancy, a

further list of factors will develop, such as:

a) Kind of residence
b) Size of lots
c) Private and parochial schools
d) Nationality of residents
e) Standard of living
f) Number of children per family

The number of children per family will be found to be due to:

to: Nationality Nationality attitude a)
b)

Economic status c) Economic
d) Morality

The importance of school population indices is being recognized more and more as the crucial factor in the locating of new sites, as these indices indicate the saturation point of school population in the different areas of a school district. The number of school children thus determined for any given areas regulates the number of school buildings which must be ultimately provided, it being assumed that the educational policy adopted by the board includes a regulatory provision as to the desirable maximum number of children to be housed in any given type of building.

Having determined the number and the geographically ideal locations of all sites by means of the indices, the actual selection of the sites is then based upon a study of other supplementary factors.1

Other indices which have been used are:

a) Residence frontage; variable, as lots may be wide or narrow.

b) Area per residence; variable, as area may be arge or small.

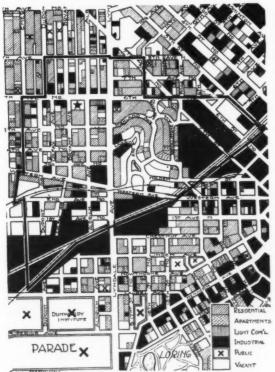


CHART B, SHOWING PRESENT OCCUPANCY
MIXED DISTRICT WHICH IS CHANGING
TO INDUSTRIAL USES

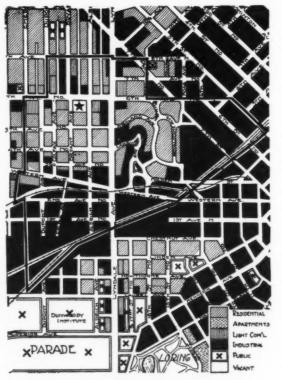


CHART C, SHOWING FUTURE OCCUPANCY IN DISTRICT SHOWN IN CHART B

c) Telephone connections; variable, as connections may be single or multiple.
d) Gas and water-meter connections.

c) Sewer connections.
f) Building permits.
A simple illustration of the use of the school population index as applied to the selection of school sites follows:

School facilities are to be provided for two districts of a city, each district being one mile square or having 278 units of 100,000 sq. ft. each. This area is used in order to simplify the illustration. One district adjoins a strictly high-class residential district and it is prognosticated that it will develop along the same lines. The other districts will become a combination of multiple family residences occupied largely by foreigners with large families.

By following the procedure outlined for the determination of school population indices, the elementary-school index for the first district is found to be 4; namely, 4 pupils for every 100,000 square feet of area in the district; and the index for the second district is found to be 12; namely, 12 pupils for every 100,000 square feet of area.

It is to be assumed that the school board has adopted a desirable maximum size of school as a standard. Say it is 960 pupils, the classroom average being set at 40 pupils: 20 classrooms for a 960-pupil building. And let us further assume that the board also has adopted three quarters of a mile as the desirable maximum walking distance for elementary-school pupils.

Out of the 278 units in the first district there would ultimately come 1,112 pupils, and out of the second district there would come 3,336 pupils. These results are obtained by multiplying the number of units in each district by the pupil index of the district. Twenty-eight classrooms would have to be provided to accommodate the pupils in the first district, and 84 classrooms for the pupils in the second district; namely, 1,112 and 3,336 divided, respectively, by 40.

As the desirable maximum size of the school building as adopted by the school board is 960 pupils, an exception is at once introduced in the first district, and the board is confronted with an economic problem in addition to that of maintaining its standard as to size of building. Shall one building of 28 classrooms be built in the center of the district, thus providing a building four rooms, or 160 pupils larger than the adopted desirable maximum size, and requiring the pupils living in the remote parts of the district to walk a distance slightly in excess of the desirable maximum walking distance? Or shall two buildings of fourteen classrooms each be built, with duplicated administration organizations, duplicated operating expenses, and duplicated equipment? To properly locate two buildings in the district also would be somewhat difficult if the buildings are to be located equidistant from all corresponding radial points. As neither the oversize of the building nor the excess walking distance for the pupils living farthest from the school violate to any considerable degree the adopted standards of the school board, the most economic as well as the wisest solution of the problem would be to build one building of 28 classrooms in the center of the district.

The second district will ultimately have to be provided with four schools of approximately 21 classrooms each and the children living farthest from each building will walk only one-half mile. Both size of building and walking distance are ideal. Each school should then be located at the center of a quarter-section of the district, and as each school is built it should be placed in its proper position regardless of where the advancing development of the district may be temporarily centered.

This illustration is rudely typical. In actual practice other factors might tend to move the site slightly one way or another. The procedure

<sup>&</sup>lt;sup>1</sup>Strayer-Engelhardt Score Card. Published by Bureau of Publication, Teachers College, New York City.

# How Much and What Sort of Publicity Should be Given Public Schools?1

Mrs. Edwina Danforth, Member of the Board of Education, Rochester, N. Y.

In the advertising section of the current magazines may be found a meant-to-be-persuasive story of a conservative father and son conducting a well established, successful business and relying upon its good product to continue its sales. The sales do not continue unabated and a study of a rival's methods, whose business had increased, shows that publicity has been the means used to win greater trade.

When the Community Chest or the Red Cross make drives, a systematic series of stories, sob and otherwise, is sent out through the district to be approached, and also accurate statements of the needs of the organization. This is done in order that sufficient sympathy shall be aroused to secure the funds desired.

If a concert is to be given, a church fair to be made profitable, a lecturer to have an audience, a new play, book, or project to be launched, possible patrons are besieged by alluring information designed to stimulate curiosity that will seek satisfaction.

When the question is asked how much, and what sort of publicity should be given public schools, it seems pertinent to begin its consideration by measuring the demands of the schools in terms of the reasons for which publicity is usually employed. Doing so, the first and third category of needs, namely, those seeking to secure more patrons, are speedily eliminated. Everyone in the school world knows that for nearly ten years past, patronage has been provided the schools in such abundance that the struggle not to be swamped by desirous patrons has barely been met victoriously. It has been accomplished only at the cost of volumes of criticism, proceeding equally from irritation caused by inadequate facilities, and by increased expenses, without apparent recognition of the fact that the remedy of the one condition must inevitably produce the other.

At first glance the schools might appear to share with the charities mentioned in the second group, the necessity for enlisting the sympathy of the community in order to secure support. But, their case is actually different, for without sympathy the charities will be without funds; while the schools are sure of a measure of support, willy-nilly, and their tasks before the public is to make so good a use of the money appropriated that those who provide it shall present the miracle of willing taxpayers. In the main it is fair to say that this condition is met by most public-school systems. If there is any one principle in this country to which enthusiastic adherence is given, it is that of general education.

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Of course, enthusiastically indorsing a principle and enthusiastically paying for it are totally different matters, but even the most grudging school commissioner is willing to pay something. His unwillingness to pay more is compounded of his ignorance as to the value of the results of greater expenditure, and his opinion, which he calls knowledge, of the community resources. This makes him a typical example of all supporters of schools.

This being the case, legitimate publicity for schools is resolved into their primary task which is education. Take, for example, adult education. The subject of the publicity should be the justification for what is being done in the schools or the desirability of suggested changes.

If this be admitted as the field for school publicity, it is clear that the word cannot carry its usual implications of headlines over reverberating articles or impassioned discourses for broadcasting. There is no place for ballyhoo in dealing with what schools should provide to function

for the best interests of those who use them, no place for superficial sentiment, for half reasoning, nor for unsubstantiated statements, miscalled facts. But those who provide the money, oftentimes enormous sums, to carry on the school systems are certainly entitled to complete honesty as to the use made of the money, and to patient, sympathetic explanation of any items of expenditure, methods or instruction which are questioned. It goes without saying, that school authorities must be cooperative with the other administrative bodies of a district in recognizing the financial limitations which may exist, and, while insisting upon receiving a fair proportion of the funds, must accept also their share of frustration of laudable desires. This attitude, too, should be thoroughly understood by the public and the nature of the improvements that might be made if they were practicable.

Disseminating School Information

It is a simpler task to decide what publicity is desirable for school systems than to devise, or advise, the means to disseminate the information, but two media are close at hand.

First, the whole school personnel, from members of the school board down to the janitors, should understand as far as possible the reasons for existing conditions, and where such understanding is not possible, they should know to whom to send complainers or inquirers in the assurance that they will receive courteous and intelligent attention. Everyone who has had a part in institutional or organization work knows the curious filtration, far from the source, of the idea of the way in which complaints and inquiries are met and of the immense value of good repute in this respect.

Second, the parent-teacher groups offer a direct means for conveying information of all varieties, one that can hardly be bettered, because it can be made informal so that miscomprehensions can be straightened out in simple, friendly fashion. The information should be given by members of the school system, so that they become individuals instead of remote personalities issuing fiats from a distance.

These two varieties of publicity reach only those who are already intimately concerned with the schools, while all taxpayers are potentially interested. Probably few of them, no matter how volubly critical, give much attention to any items of the formal publications of school budgets and reports except possibly, to the totals. It must be admitted that these are often appalling if taken without consideration of the number of children involved, the problems that are met, and the probable long-range economies effected through present methods of teaching those who would otherwise become public charges.

Just as talks to parent-teacher groups are the best medium for information, the second best may be talks to more formal groups, such as civic, church, social, and business men's and women's organizations of every kind. These might include many of the parents and teachers, but would also have many members not close to the schools. Possibly not so effective, but reaching large numbers, come articles in the slowly and comfortably read Saturday night and Sunday morning papers.

Publicity Must be Well Done

These last demand, even more than the word of mouth communication, that they shall be prepared by someone who has clear vision, direct, simple style, genuine sympathy with the school point of view and the gift of story-telling. If any of these qualities are absent, then it will be better for the school that the articles should be absent too, for what is not said rarely does harm, while it is unnecessary to elaborate on what can be accomplished in that direction by what is said. Granted, however, that they can be well done,

such talks and articles are received with great interest. Even in highly privileged groups there is almost no knowledge of what intelligence tests, visiting teachers, and special classes mean to a school system; of how crippled children are cared for, open-air schools conducted, or of the scientific research that lies beneath the changed methods of teaching the three R's, or the changed ideas as to what the schools should give their pupils. About any or all of these, fascinating tales can be made.

Offsetting those who complain of expensive buildings, "fads and frills" and excessive costs, are thousands of fathers and mothers who are willing to pay for safe and healthful buildings and well-trained teachers at adequate salaries. Many of them see with awe that their children really like to go to school, and, being interested parents, they are glad to learn the way of such a result. They do not raise their voices as loudly as the objectors, until there is question of altering for the worse, some of the good conditions, then listen to the outcry! It is they who are the bulwark behind the school if there is a question of assault and the more they can be made conversant with the main problems, the better. Overstuffing is a popular condition in furniture, but in other matters it usually produces dire results and somehow the amount of material that is put out about school affairs must be just a little less than the most that would be desired. In other words, it should be asked for except when some particular crisis arises. That it shall be asked for, can be managed through suggestions made by principals to parent-teacher groups, from whose members good report waves spread out to reach receiving stations, and by occasional discreet mention to other group leaders that good material lies in waiting.

What a Newspaper Can Do
In the community which I have the honor to
represent, the chief morning paper devotes a
whole page on Sundays to school matters, recounting events of importance which have occurred during the week in any of the schools.
This page, after four years, was discontinued but
has been resumed because its absence caused so
much protest. Part of the page, or sometimes in

has been resumed because its absence caused so much protest. Part of the page, or sometimes in addition to it, is an article, of the type suggested above, on a school activity, but it can hardly be too strongly emphasized that the success of this enterprise has been due to the ability of the writer who, beginning by reporting meetings of the board of education, gradually wrote on interesting topics that she found at the central office, and in time evolved the page of school notes. She gives her aim as "an attempt to interpret the schools to the public, and to provide a vehicle of threefold interest-to the public, the teacher, and the children"; and she regards as one of the elements of the success achieved, that never does her material appear in the form, or with the intent, of propaganda.

A possible objection to the notes might be that they foster the notion that it is desirable to have one's name in the paper. So far, however, this hypothetical drawback has failed of effect beside the actual accomplishment of conveying to the outer world a sense of the vivid, pulsating life of the schools, with their many faceted interests, their wide sympathies and enthusiasms, their high ideals, and their wholesome fun.

The situation that exists, then, is this—it is not necessary, in the language of the day, to sell schools to the public. That was done generations ago so effectively that the public has responded by making attendance at some school mandatory. Its faith in the state schools is so great that only 10 per cent of the children of the country go to other schools, private or denominational. But what is necessary is to try to give this great mass of patrons and supporters of the schools some

<sup>&#</sup>x27;Note: This manuscript was read before one of the regional meetings held by the Associated School Boards and Trustees of the State of New York.

accurate understanding of the earnest study and the great ability that are being put into the task of fitting today's schools to prepare the children who attend them to take their part in the life of today and tomorrow, and to get their full allowance of happiness from that life.

It is said that the schools are usurping functions of the home and the church; it is said that they try to do too much and spread out too thinly. The only way in which such criticisms can be tested, is by intelligent judgment of the results, given through their product. To secure and hold the interest of a public sufficiently intelligent to measure this product, willing to consider temperately the methods that produced it, and to give judgment as to their value in terms of school costs, is a task that should be part of the work of any school system; but it is a quiet, unceasing task which must be met this week in one way, next month in another, and never by the flamboyant efforts that are generally labeled "publicity."

Only one thing is certain about it, it is like charity; it blesses those who give and those who receive. For to anyone who studies school ways faithfully enough to interpret them to others, and to anyone who is willing to listen and learn about them, is opened up a new world, full of fascination in the present and of poignant hope for the future.

# THE EDUCATIONAL VALUE OF MOTION PICTURES

Mr. Gustav Straubenmuller, associate superintendent of schools of New York City, recently presented a report to the board of superintendents for the purpose of proving that motion pictures can be used to advantage for instructional purposes.

The investigation was undertaken with the double purpose of determining whether it is desirable for school administrators and teachers to enter upon a more extensive program for the use of motion pictures in the classroom. A number of careful experiments was undertaken, which resulted in the finding that the motion-picture film has a distinct educational value. The experiments dealt with films not produced specifically for educational purposes, and the lessons for the most part were not a part of the course of study, hence the results were not entirely reliable.

The investigation showed that the casual introduction of films into the curriculum without careful planning and organization is of comparatively little use. Insofar as possible, a classroom film should be used for some definite and particular purpose. The films used in this case were made expressly for the purposes of the experiment. They were made from scenarios prepared by experienced teachers, and in their planning, cooperation was secured from committees of teachers in a dozen different cities.

A total of twenty films were selected to be tried out as pedagogical devices, including ten topics in general science and ten in geography. The series in geography was designed for use in the fourth, fifth, and sixth grades of the elementary school, and the one in general science was designed for use in the junior high schools. Each film was planned to cover ten weeks of instruction.

The films were used in 75 different schools distributed in twelve cities, and were adapted to the course of study from grades four to nine, inclusive. They were shown to 6,000 children in more than 300 geography and general-science classes, with nearly 200 teachers taking part in the experiment.

In the final comprehensive test given at the end of the experiment, 78 per cent of the pupils of the experimental group in general science excelled the average of the control group, and 80 per cent of the experimental group in geography excelled the average of the control group.

In the topical tests, 61 per cent of the pupils in the experimental group in geography, and 59



EDWARD D. ROBERTS, CINCINNATI, OHIO Dr. Roberts will succeed Supt. Randall J. Condon on September 1, 1929.

per cent of those in general science excelled the average of the control group.

In both the geography topics and the topics of general science the experimental group was decidedly superior on the descriptive side; both groups were approximately equal in the more abstract type of question, in the explanatory and reasoning type.

On the question of the use of educational films, the general tenor of the replies was overwhelmingly in favor of the film. On the question of the use of industrial films, the report found that they are extensively used because they can be obtained easily and frequently without any financial outlay. They are, however, only a makeshift and are capable of becoming integrated with the regular curriculum only rarely. Entertainment films predominate everywhere and are commonly shown in the auditorium.

As a result of the experiment conducted in the schools, it was the finding of the committee that the motion picture may be successfully and profitably used if the pictures are made specifically for instructional purposes, and fit exactly into the course of study.

#### DECRYING SCHOOL BOARDS A FAVORITE INDOOR SPORT

There is a tendency on the part of certain educational leaders to center their public utterances upon the modern board of education and secure considerable satisfaction in belittling their contribution to the cause of popular education. A pedagogue, speaking at the summer school of the University of Michigan, hurled the startling charge that "the greatest obstacle to education is boards of education." What applause he reaped is not reported.

There are instances on record where school superintendents have suffered injustice at the hands of boards of education. Again, there are boards of education that fail in a proper conception of the relations that should exist between that body and the professional workers, or to recognize to the full the prerogatives of a school superintendent. No one denies this. But are not these the rare exception, rather than the rule.

There are American cities where a bad brand of politics rules and where the tenure of the school executive is an uncertain factor. But there are many more cities where the executive enjoys all the prerogatives that rightfully go with his office. Is it not true that the modern school superintendent is carefully chosen and reasonably compensated? Why condemn the many for the sins of the few? Why the sweeping charges which have neither a sound basis nor the semblance of reason?

There are educators who have real grievance. This must be admitted. But their number is negligible. The number of those who are securely attached and well compensated is large. The office of school superintendent in the nature of things is a difficult one to administer. That official not only deals with a board of education, but he deals with the professional forces, the public press, and a general school constituency. His troubles, therefore, are not always traceable to the

board of education. They may arise in sources over which the board-of-education members have no control and develop into an opposition against which they cannot protect him.

Then it should be remembered that where disagreements between boards of education have arisen, the fault has not always been on the side of the former. There are school superintendents who are not big enough for the job they seek to fill. An educator may come to the defense of another educator who is in trouble. But there is sometimes an inside story which conclusively proves that the defeated schoolman fell because of his own weakness. It is preposterous to hold that every time a school superintendent has failed of a reelection he has simply been victim of an injustice perpetrated by a board of education.

The adjustments, whereby the equities between boards of education and superintendents have been clarified, have been steady and constant. For the past quarter of a century the tendency has been toward a clearer definition and more equitable relation between the two. The superintendent of schools has gradually come into his own, and is being recognized as the chief executive of the school systems. Boards of education recognize his educational leadership and clothe him with powers that enable him to realize the purposes of his office.

There is, however, a coterie of educators today in this country that is seeking to tilt the pendulum a little too strong the other way. They do not miss an opportunity to enlarge upon the sins of the isolated few and to belittle the splendid contribution made by the thousands of boards of education throughout the land to the cause of popular education. We are satisfied that they are going too far in their denunciation of the modern school administrative bodies.

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# A Study of School Desks and Seats

Elbert R. Mills, McKenzie, Tenn.

The problem of fitting children with proper seats and desks is an old one. It has been given too little importance in the administrative routine and, because of this casual treatment, has not kept pace with other educational prog-ress. Many school authorities give little thought classroom seating other than to see that each child has a desk of some sort. In the purchase of pupils' desks a majority of school boards consider only two questions: (1) What is the least num-ber we need? (2) What desks can be bought for the lowest price? While the educational financing is a great undertaking, school officials should remember that the physical care and development of children is also a large responsibility, and that the latter should not be sacrified to save a few dollars. Money spent for seating that does not meet health needs may become a liability in the form of deformities and retardation or organ development of boys and girls. In a blind effort to economize, a school board may easily provide the cause for increased costs of health departments that more than offset the higher purchase price of satisfactory desks. The merit of school desks in the light of health investigations and teaching value is of first importance, and only from this point of view is there any chance of improving classroom seating.

#### Three Points to be Studied

Since the days of the split-log benches, many kinds of pupils desks have appeared; some were soon discarded while others are still found in use. In the light of special accommodation features, dozens of models of desks are on the market, but all fall into a few specific groups of seating. In keeping with the manufacturers' terminology, these are the (1) combination desk, (2) the pedestal desk, (3) the chair or settee and desk, (4) the combined chair-desk, (5) the study-chair desk, and (6) the tablet-arm chair. In addition to these, tables and chairs constitute a seventh type of seat for school children. The first six types are either adjustable or nonadjustable, movable or nonmovable, and have or have not various other accommodation features too numerous to mention.

It is not the purpose here to argue for or against any particular type of classroom seating. Still the objective of the paper cannot be made clear without presenting the writer's opinion of these desk types, pointing out relative merits of each in the light of child health and classroom

A study of desk types involves three points of view: child health, school administration, and durability. From the standpoint of health three parts of all desks—the desk lid, the back support, and the seat—are to be considered with regard to their dimensions, shapes, and colors, With regard to administration, such accommodation features as movability, adjustability, and storage facili-ties will be discussed. Although durability is a secondary consideration, the discussions will also show that the ability of classroom seating to retain the original, desired shapes is of prime importance for the comfort and the physical welfare of pupils. Likewise, the uniformity of the desk pattern depends largely upon the materials and modes of construction and should not be overlooked by the purchaser even at a higher cost.

#### The Combination Desk

As the best desk for a basic analysis of all types of classroom seating, the combination desk holds first place because it is the oldest on the market and the most extensively used. Very few of us indeed have not had the pleasure of sharing one of such desks with another boy—or perhaps girl. The combination desk is that type of class room seating that has a frame, usually of steel or semi-steel, of two separate standards to which attached a desk lid on the back and a seat on the front, commonly by hinges. In the simple form the lid is fixed over the book box, and the and seat are not adjustable. It is this type model that is still purchased extensively for use in the schools of all ranks—elementary, seconand college-both public and private. A decade ago the unhealthful aspect of such seat ing was severely criticized by experts on child

health and posture, resulting in a slackening in its installation and the increase in the use of other types, particularly those having adjustable features. During the past few years, however, there seems to have been a return to its purchase and use for several reasons: (1) Such desks are cheaper. (2) They are simple in construction. (3) There is on the part of school people a lack of knowledge of or a disregard for hygienic principles. (4) Where other types have been installed, proper use has not been made of their advantages, or the promised advantages have proved to be impractical.

In his book on education hygiene, Averill says that there is a grave difference between adjustable school furniture and adjusted school furniture; that the former is not always identical the latter. The study of classroom seating by the writer verifies Averill's statement.

#### Other Features of Combination Desks

Let us examine some other types of combina-tion desks: Most of such desks are made in both adjustable and nonadjustable models. The adjusting devices are usually cumbersome; they require special tools, and frequently only one set of tools is found, or even none, in an entire school system. Such models are extra heavy, making them hard to handle. Their chief advantage is to break rows, or serve as steps between stationary sizes.

The lifting top deserves next consideration as a distinct accommodation feature. The one advantage is to enable a child to put away his books and materials or to get to them more conveniently. The two disadvantages are: (1) The lifting lid frequently causes articles like ink bottles to fall to the floor. (2) Some children place their books in such a way as to hold the desk lid up to such degree that it has a negative tilt of 10 degrees or more, rather than the needed positive tilt of that much. This is a serious complaint, as a lifting desk top improperly used is hard upon the child's eyes, induces fatigue and poor study, and retards writing progress. The writer's investigations involved an experiment in adjusting classroom seating that had just such desk lids. On one counting 23 of the desk lids were lifted up and back (negatively tilted) from inches; at another counting there were 17.

Another model of desk has the lid so hinged

on that the positive tilt may be increased to hold the book at the proper angle for reading. How-ever, as this lid is tilted, the bottom edge draws from the pupil, causing him to bend for ward to get within reading distance of his book. Any benefits are thus counteracted.

The design of standards for combination desks are all similar but vary in details of scroll work, finish, and the cross section or shape at points where cast desks most frequently break and steel desks bend and warp. The irons of such desks should possess no scroll work that will catch dust; they should be finished in black, olive, or dull brown, and should have sufficient reinforcing, especially at the points of greatest strain. The most important consideration to be given the irons is their effects upon the original tilt and inclination of the seat, the back support, and the desk lid; especially their ability to maintain the proper relationships of the parts, commonly called the woods.

Other Types Compared

A discussion of the other desk types to show their relative merits is unnecessary. The "chair-and-desk" type is probably second in order of usage, but is fast giving way to other types. This form of seating has one advantage over the com-bination desk in that the seat and desk are built on separate frames. A disadvantage is that such

seating requires a trifle more floor space.

The "pedestal" desk is a third type of classoom seating: it is credited with one advantage, it is easier for the janitor to sweep around it. It is built on a solid pedestal-like base, but on most models the desk and seat supports are separate. These separate uprights to support the backrest prevent many of the jars caused by one child from disturbing the other child who shares the other part of the desk. The separate uprights are somewhat flexible and are therefore more restful.

The "movable chair-and-desk" called the "universal" desk by some manufacturers, is a fourth type and it is fast replacing the stationary form. It offers every advantage of the old separate chair and desk even to price, and in addition is not fastened to the floor. Its movability and single-unit arrangement are its only distinct advantages over the combination desk; purely administrative helps.

The "study-chair" desk is a fifth and most hopeful type from a hygienic point of view. This type of desk has many desirable features, yet it also has the disadvantage of occasionally being out of working order. Some of the study-chair desks are as unhygienic as any of the other models, and even the best are kept in poor adjustment by careless school authorities. The seatheight distributions are no better than that of other types, the seat and back have no better shapes, and the desk-top arrangement of some models is not so good as that of the other types.

The two other types of classroom seating are "tablet-arm chairs" and "tables and chairs." Tablet-arm chairs are widely used in lecture rooms, and in some high schools are used even as home seats. Tables and chairs have a small but enthusiastic group of advocates for use in high schools and are gaining favor for use in the primary grades, particularly first grades. Of all types of classroom seating these two are the least adapted to the physical needs of pupils.

Even kindergarten tables are badly proportioned in height. In my investigation of class-room furniture I have not found adjustable tables, although I have found a number of little fellows in the process of being adjusted to the tables which were much too high for them. There are varied sizes of tablet-arm chairs, whether they are properly selected and distributed or not. and there is no reason why tables cannot be built that offer every advantage to children in groups of fours and sixes that is offered to individuals in the other types of furniture.

Desks in General
As a whole, the "semi-steel" desks are more uniformly proportioned hygienically than similar desks of steel construction. Three factors are involved to influence these relationships: (1) The scientific care of the manufacturer in proportioning the desks; (2) the materials of construction; (3) the seat hinges. By comparing the manufacturers' desk dimensions with the proportions given in Tables XVII and XVIII, one should be able to judge hygienic proportions. Unless steel is of good quality, it gives, bends, and wears more readily than semi-steel. The latter seems to hold the correct proportions over a longer period of time. Steel desks are usually fitted with friction seat hinges, and the seat arm comes to rest against either some soft material, as leather, or a steel projection, or both. Leather and similar substances are easily compressed and worn, and on the other hand absorb moisture and become swollen. In the former condition (compressed and worn) the seat does not come to stop at the proper point, hence a minus or forward tilt results. However, when the material is swollen, the seat is stopped before it comes to the proper point, hence a plus or backward tilt of too great a degree. Where a steel projection is used, it becomes battered and worn and after a few years the seat has a minus tilt, i.e., pitches forward. To avoid this early minus tilt which is the most tiring of all conditions, some desks have larger steel projections which usually cause the seats to have a plus tilt that is entirely too great while the desks are new, maybe about right after several years' use, and finally a minus tilt—two evils to save a year or two of time. It should be observed not all semi-steel desks

avoid the hinge trouble. Where semi-steel desks depend on soft substances to check the seatarms, the same trouble is experienced. Hence, with regard to hinges, it is the soft substances that must be avoided whether in steel or semisteel desks or desks made of other materials. Contrary to this objection to the use of soft materials to check the jar of the seat, Anderson, in his score card for school seating, requires (Continued on Page 150)

# The Dayton School-Building Program

Part I. Principles Underlying the Program

Paul C. Stetson, Superintendent of Schools

In 1924 the board of education in Dayton found itself faced with an increasing demand from various civic organizations, parent-teacher association groups, and school officials, that it make plans for a building program.

The policy of the board of education has been to regard its building program as one involving highly technical, scientific, and educational questions. In line with this policy it freely called upon qualified experts for advice in formulating

and in executing its work.

In general, the steps taken were these: To determine present and future building needs through a scientific survey; to arrive at an accurate estimate of the money required; to select architectural service; to determine the location of sites; to arrive at a scientific method in the selection of equipment; and finally, but most important, to determine in advance the general educational policies upon which the whole program should rest.

How the Needs Were Determined In the spring of 1924, the board of education in Dayton asked the Dayton Research Association if they would conduct a survey of schoolbuilding needs, and render a report at the earliest possible moment.

The reasons for asking for this survey were two. First, it was desired to have an accurate study made of the situation by experts, and second, it was felt that, if some disinterested agency were to render the report, it would be prima facie evidence that the board of education was perfectly willing to rest its case upon the findings of such a body.

A survey was made and a report rendered to the board of education early in September, 1924. There is no necessity of going into the details of this report except to say that it showed, through comprehensive tables, the school-building needs in each section of the city. The study included tables of school population up to 1931.

This report, after careful study by the board of education, was adopted. It was decided at that time that the entire program should be carried out, and that a sum sufficient to do this be asked for. It was then necessary for the board to determine the amount of money which this program would cost. The board did not desire to make the mistake of asking for too small an amount, and thus be forced to go again before the people for extra bond issues.

The supervising architect employed by the board of education was requested to make as accurate an estimate as possible of the amount needed. After a very careful study he rendered a report giving the estimated cost of each building, addition, and remodeling project, together with such sums as would be required for architects' fees, sites, equipment, interest, and legal services.

It was determined from this study that the board of education would need \$2,320,000 for new buildings, \$808,000 for additions, \$40,000 for fireproofing, \$150,000 for sites, \$327,000 for equipment, and \$150,000 for interest. It was also estimated that approximately \$150,000 would be earned in interest from depositories. These sums, with a few miscellaneous amounts, indicated that the board of education would need approximately \$4,000,000.

Obtaining Architectural Service

After the board of education had passed the necessary resolutions authorizing the presentation of a bond issue at the next election, the problem which confronted them was the selection of architectural services. After a great deal of discussion and many conferences with leading architects, the method decided upon was to employ recognized and reputable local architects,

and to have in addition to these local architects, the services of a consultant. The reasons for this, in general, were as follows:

First, such a plan allowed the board to employ recognized, reputable local architects who felt, justly, that they were entitled to this recognition.

Second, it prevented the board of education from having a decentralized architectural plan by centralizing the whole scheme in the office of the consulting architect. Thus the board of education was sure of continuity in all of the work.

Third, it was felt that the consulting architect could bring to the services of the local architects a wide experience in the planning of school-

Fourth, this plan has been followed in Dayton, as in other cities, quite successfully in regard to the building of hotels, hospitals, and Y.M.C.A. buildings. It was felt that there was every reason to suppose that the erection of a schoolhouse involved problems quite as technical in their nature as are found in any other type of public building. For this service the firm of William B. Ittner, Inc., of St. Louis, was chosen.

Locating Building Sites

The board of education also considered the problem of selecting sites. Our board called upon the city planning board for suggestions, and in every case purchased sites in accordance with the recommendations of that body. The city planning board had projected scientifically the growth of the population in this city until 1950. so that when the board of education followed their recommendations, it was doing it with the assurance that it had back of it the best of scientific research. There is no project which troubles boards of education and their officers more than the purchase of sites. We feel that our problem was made easier because of the willingness of the board of education to ask for and accept the recommendations of a disinterested but scientific body.

One of the most important questions before the board of education had to do with the pro-

cedure for purchasing school equipment. The business manager and the supervising architect recommended the following procedure which was adopted and has been followed with results which increased the efficiency of the buildings, decreased the cost of equipment, and tended to increase competition due to the elimination of vague and uncertain specifications.

Detailed plans have been prepared for standard items of school furniture in regular use. These designs incorporate the results of various studies on correct seating, structural details, and methods of finishing, as well as recommendations of our own supervisors on educational requirements.

In equipping a new building, a list of the standard and special equipment required for each room is prepared in cooperation with the principal and supervising teachers. Detailed plans are then prepared for special items and combined with the standard plans for the required equipment. Complete specifications listing the terms of purchase, delivery, installation and other general information, as well as quality of materials and workmanship, are prepared and advertised for bids in accordance with legal requirements. After bids are opened, the bidders are questioned concerning their familiarity with the plans and specifications, sources of supply, and general ability to furnish the items bid. Contracts and bonds are then executed with the lowest regular bidder.

All equipment is inspected and compared with plans and specifications upon delivery. Plans show sufficient detail to eliminate controversy.

The last bids which the board of education received on equipment were from 15 to 25 per cent lower than those received two years ago on similar items.

#### The Educational Policies

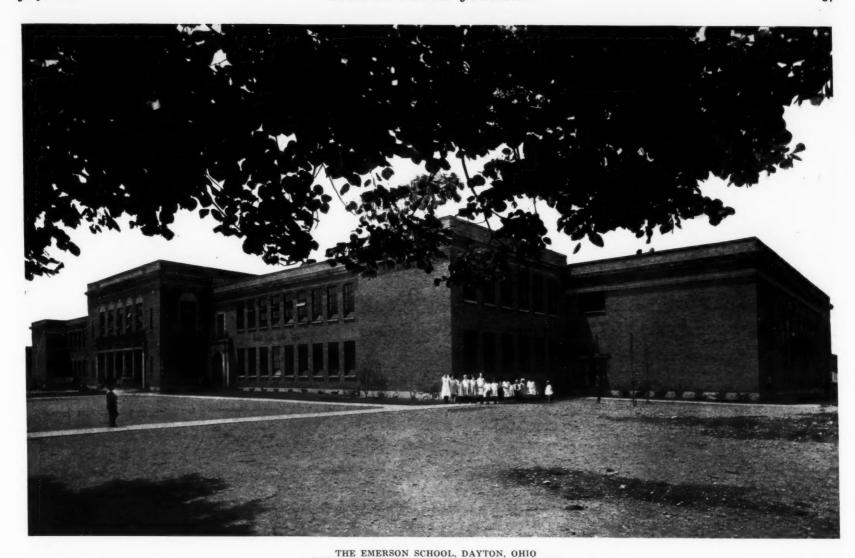
Important as are the foregoing decisions of the board of education, the most important one it is called upon to make is in relation to the general educational policies upon which the whole building program shall be built. The board

(Concluded on Page 150)



I.IBRARY, WOGAMAN ELEMENTARY SCHOOL, DAYTON, OHIO
William B. Ittner, Consulting Architect, St. Louis, Mo.
Pretzinger and Musselman, Local Architects, Dayton, Ohio
d located so that it serves as a branch of the public library, open every evening. Pretzinger and
This library is planned and located so that it so

e



THE EMERSON SCHOOL, DAYTON, OHIO

William B. Ittner, Consulting Architect, St. Louis, Mo.

Gebhart and Schaeffer, Local Architects, Dayton, Ohio

The first Junior-Elementary School in Dayton erected under a previous bond issue. The success of this school, educationally and economically, led to the development of three similar combination schools under the recent \$4,000,000 building program. Capacity, 1,640. Cost, \$498,000.



THE DANIEL KISER SCHOOL, DAYTON, OHIO
William B. Ittner, Consulting Architect, St. Louis, Mo.
Architectural Department of the Board of Education, Dayton, Ohio, Local Architects
Dayton's second Junior-Elementary School, individual both in plan and design. Its exterior treatment represents an excellent example of the adaptation of a domestic type of architecture to a building located on a site given in memory of a Revolutionary War soldier.



THE WILBUR WRIGHT ELEMENTARY-JUNIOR SCHOOL, DAYTON, OHIO
William B. Ittner, Consulting Architect, St. Louis, Mo.
Herman and Brown, Local Architects, Dayton, Ohio
The third combination school. Although the size and curriculum offerings of the four Junior-Elementary Schools were similar, the plans show many variations due to site conditions and specific problems in the several school districts. The Wilbur Wright shows an adaptation of the typical plan to a site with an abrupt drop in grade.



THE LINCOLN JUNIOR HIGH SCHOOL, DAYTON, OHIO
William B. Ittner, Consulting Architect, St. Louis, Mo.
Walker and Norwich, Local Architects, Dayton, Ohio
The only Junior High erected under the recent program. It was planned for 1,200 students at a cost of \$476,850. The building is located on the top of a very high hill.

## The Dayton School-Building Program

Part II. The Buildings Erected Under the Program Paul C. Stetson, Superintendent of Schools; William B. Ittner, Consulting Architect

The architectural service arrangement for the recently completed school-building program for Dayton, Ohio, consisted of the consulting architect and six local firms. In addition, before its abandonment, the architectural department of the Dayton schools served in the same capacity as the local firms for one new building, an addition, for many alterations and for the fire-proofing of some of the old buildings. By the service arrangement mentioned, the consulting architect became the board's interpreter of educational policies in the development of typical plans for the new elementary and secondary schools. These typical plans served also as guides for the addition and alteration projects. Detailed plans and specifications were developed by local firms after preliminary studies had been worked out in the office of the consulting architect.

The Dayton program consisted of six new buildings, eight additions with fireproofing and alterations and the fireproofing of six old buildings. A new normal-training school was also included. The new schools were classified as follows: Three became junior-elementary schools, one was a junior high school and two were elementary schools. As the preliminary work of the board of education had determined fairly well in advance the locations and site areas, the architects could proceed at once with the building plans.

Two typical plans were developed in line with the board's policies on the size of schools, curriculum offerings, and type of organization. In general the 1000-pupil school was regarded as being the most consistent with efficiency and economy. There were, of course, all sorts of variations from this size, but it served its purpose as a determinant in the development of the typical

plans. The board's policies further favored the platoon plan from the second, third, or fourth grade up. The reorganization plan became the principal determinant in the development of the typical plans.

The average per capita building cost of Dayton's new schools approximates \$300, a moderately low cost for the facilities provided, the efficient plans, and the fire-resistive and durable type of construction. The enlarged units, the



THE NORTH DAYTON ELEMENTARY SCHOOL, DAYTON, OHIO
William B. Ittner, Consulting Architect, St. Louis, Mo.
Hermann and Brown, Architects, Dayton, Ohio
This school and the Wogaman were the two new large elementary schools for the first six grades and kindergarten.
The plans include an auditorium and gymnasium, a library 22 by 60 ft., a combination cooking and sewing laboratory, a general shop, large rooms 24 by 40 ft. for kindergarten and primary grades, and eleven normal classrooms. Capacity, 900. Cost, \$200,000.



LEOTA CLARK ELEMENTARY SCHOOL, DAYTON, OHIO

William B. Ittner, Consulting Architect, St. Louis, Mo.

Architectural Department of the Board of Education, Dayton, Ohio, Local Architects

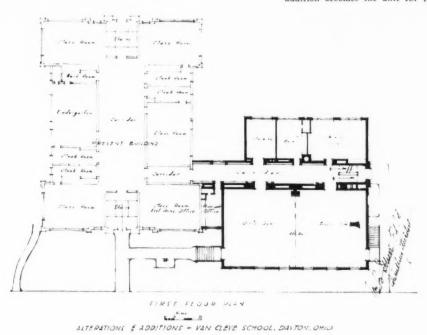
This one-story Colonial type of school in the Patterson subdivision serves kindergarten and first four grades. Capacity, 240. Cost, \$84,049.

platoon organization, and care in planning made up the chief factors in reducing costs. The extension of the junior-elementary combination wherever circumstances and conditions were favorable constituted the largest single factor in cost reduction.

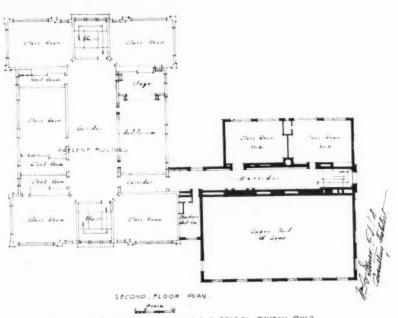
The first junior-elementary school in Dayton was the Emerson School built under the previous bond issue. The school was developed at first as an elementary school for the first six grades and kindergarten, with platoon plan above third grade. There were approximately 300 junior highschool students in the Emerson district of the city, not a sufficient number for the initial unit of a typical junior school. As the Emerson School included in its educational content all requirements of the junior curriculum with the exception of the commercial suite, a general science laboratory and an additional shop, a restudy of the Emerson plan revealed the fact that by the inclusion of the missing units mentioned, the junior high-school enrollment could be cared for, at least, for several years. The Emerson School, therefore, was Dayton's first experiment with the junior-elementary combination. A discovery had been made, however, which became a decided factor in the new program. The revised Emerson plan increased the cubical



THE VAN CLEVE SCHOOL ADDITION, DAYTON, OHIO
William B. Ittner, Consulting Architect, St. Louis, Mo.
Bruce Lloyd, Local Architect, Dayton, Ohio
The addition is planned and connected in such manner that, when the old building is eventually torn down, the tion becomes the unit for the new building.



William B. Ittner, Consulting Architect, St. Louis, Mo.
Bruce Lloyd, Local Architect, Dayton, Ohio
The Van Cleve alteration and addition problem is similar to the seven other projects under the recent building program. In every case, the typical elementary-school plan served as the guide as to size, educational content, type of plant, and construction.



ALTERATIONS & ADDITIONS - VAN CLEVE SCHOOL DAYTON OMIO

William B. Ittner, Consulting Architect, St. Louis, Mo.
Bruce Lloyd, Local Architect, Dayton, Ohio
Plan shows how the space in the old building was reorganized and the location of the addition which forms the initial unit of a new building.

content by approximately 150,000 cu. ft., and increased the total cost \$75,000, but as the capacity showed a 25 per cent increase, the per pupil cost was reduced from \$420 to \$309. This economy discovery with the Emerson plan caused the board to look for similar situations in carrying out the new program. Three favorable situations were found, one in the Daniel Kiser School, one in the Wilbur Wright School, and the other in the Dayton View or Colonel White District School.

The Colonel White Junior-Elementary School was planned for 1,500 pupils and for the workstudy-play plan from the second grade through the nine grades. On this basis, the curricular requirements called for 20 classrooms, a classroom-auditorium for 80 pupils, and double gymnasium for the junior grades, a playroom-auditorium for the elementary grades, a cafeteria and 14 special classrooms. As the slope of the lot gave a full story height on the ground level on two sides of the building the playroom-auditorium equipped with a small stage, the nature study, drawing, and handwork rooms were grouped on the ground floor, directly accessible to the outside. This plan arrangement gave pos-

sibilities for a unification of all the special class activities of the lower elementary grades. The arts and crafts suite and two shops, one for mechanical drawing and one for general work were also given an advantageous location on the ground floor.

The first-floor plan shows the double gymnasium and the auditorium which make up a connected unit for the junior-high and upper elementary students. By opening the stage to the gymnasium, the dressing rooms, as well as the gymnasium space, become available for the auditorium. In fact, the plan shows that four distinct units are brought into close correlation, viz., the auditorium, the gymnasium, the music and expression room and the cafeteria, giving possibilities for community and multiple use. The music room is planned for multiple use, and is equipped with a stage and storage space.

The Colonel White Junior-Elementary School is the fourth of its kind in Dayton. It was erected at a cost of \$450,000, yielding a per pupil cost of \$300.

A comparison of the first junior-elementary plans, viz., the Emerson, with the Colonel White, the fourth, brings out changes that have come about as a result of a year's experience with the combination school. The latter shows expanded health, library and study quarters, a more definite grouping for related subjects and a more specific assignment of a section of the building to the lower elementary-grade pupils. The other differences in the plan were caused mainly by the variation in site conditions and specific local problems. Both schools were planned for approximately the same capacity and for similar curriculum requirements and type of organization.

The Daniel Kiser<sup>2</sup> and Wilbur Wright schools, the other two junior-elementary buildings in Dayton, although practically the same in size and educational program, show distinct variations in plan arrangement due to local conditions and desires. For instance, the rear half of the Wilbur Wright School, due to a drop in the grade, is three full stories, while the front has but two floors. All of the health quarters, the choral room, the cafeteria, three large shops, and the household-arts group are on this lower rearstory level, an arrangement that has many advantages in the administration of the school. In this school, the auditorium forms the central feature of the facade. On one side of the audi-



THE COLONEL WHITE JUNIOR-ELEMENTARY SCHOOL, DAYTON, OHIO William B. Ittner, Consulting Architect, St. Louis, Mo. Bruce Lloyd, Local Architect, Dayton, Ohio

torium on the first floor is the library-study, 23 by 84 feet, balanced on the other side by the school office group and the kindergarten, 23 by 50 feet. None of the other junior-elementary schools shows this arrangement, although the various units are similar in size and plan.

Dayton has planned only one regular junior high school under the present building program, viz., the Lincoln School. This was in a district where there were sufficient junior students to plan a 1,200-pupil building. The plan includes the same educational content as that of the elementary-junior schools, except that the special rooms for the elementary grades with a proportionate number of classrooms have been omitted. Features of the Lincoln plan include the school library on the first floor planned as a public library for the community, and a large undivided shop space 38 by 120 feet on the ground floor. This shop area may be divided by temporary partitions as demands arise. The Lincoln Junior High School was erected at a cost of \$476,850, yielding a per pupil cost of \$396.50, a per pupil cost about one-third greater than that of the junior-elementary schools.

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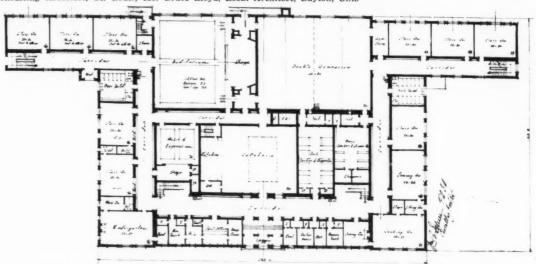
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The typical elementary school for Dayton may be represented by the G. A. Wogaman School. It is a 1,000-pupil school with facilities for the platoon organization from the third grade through the sixth grade.

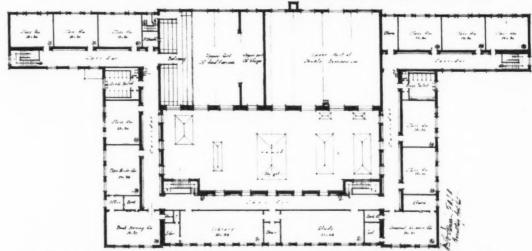
In arrangement the principal differences between the typical elementary and the juniorelementary schools are the following:

1. The general science laboratory and the commercial suite have been eliminated.

2. A combination cooking and sewing room takes the place of the two separate units with accessory space.



FIRST FLOOR PLAN, THE COLONEL WHITE JUNIOR-ELEMENTARY SCHOOL, DAYTON, OHIO



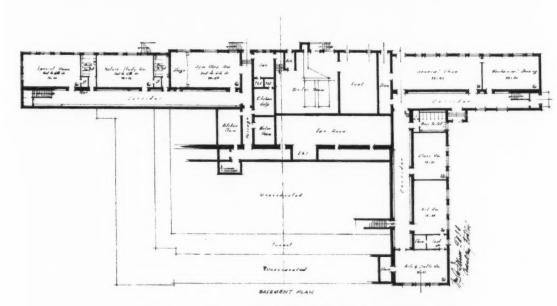
SECOND FLOOR PLAN, COLONEL WHITE JUNIOR-ELEMENTARY SCHOOL, DAYTON, OHIO William B. Ittner, Consulting Architect, St. Louis, Mo.; Bruce Lloyd, Local Architect, Dayton, Ohio



WOGAMAN ELEMENTARY SCHOOL ,DAYTON, OHIO William B. Ittner, Consulting Architect, St. Louis, Mo. Pretzinger and Musselman, Local Architects, Dayton, Ohio



GYMNASIUM, WOGAMAN ELEMENTARY SCHOOL, DAYTON, OHIO
William B. Ittner, Consulting Architect, St. Louis, Mo.
Pretzinger and Musselman, Local Architects, Dayton, Ohio
ymnasium for Dayton's new elementary schools, 60 ft. by 80 ft. Illustration shows the folding
it possible to conduct classes for boys and girls with two different teachers simultaneously. This is a typical gymnasium partition making it possible



COLONEL WHITE JUNIOR-ELEMENTARY SCHOOL, DAYTON, OHIO
William B. Ittner, Consulting Architect, St. Louis, Mo.
Bruce Lloyd, Local Architect, Dayton, Ohio
Note the drop in grade giving a full story height along the rear and side of building.

- 3. A smaller auditorium supercedes the large
- 4. The mechanical-drawing shop is omitted.
- 5. There is a proportionate reduction in the number of classrooms.

The other special units are practically the same as in the combination junior-elementary.

The one-story type of elementary school for Dayton was restricted to outlying subdivisions for the lower grades. One of these, the Leota Clark School, is typical. It includes a kindergarten, three classrooms, and a small library. The gymnasium-assembly room serves a dual purpose and adjacent is a small kitchen for the preparation of school lunches.

A large part of the Dayton program consisted of additions and alterations of old elementary schools. One of these, the Van Cleve School, is representative of the general difficulties encountered in modernization and expansion of the existing building. This old building was a 16 classroom school with seatings for 640 pupils. The problem was many-sided: (1) fireproofing corridors and stairs; (2) improving the lighting, heating, and ventilation; (3) remodeling some of the old classrooms into special rooms; (4) increasing the housing accommodations and providing a gymnasium, kindergarten, and at least a small auditorium.

In the old Van Cleve building, 4 classrooms on the first floor were retained and modernized. The other 4 were remodeled into a kindergarten, school offices, and a large special room. On the second floor the 8 classrooms were changed to 5 improved classrooms and a small auditorium. The attached new 2-story addition included the gymnasium with accessory rooms, 2 classrooms and 1 special room. The Van Cleve School capacity was thus increased from 640 to 800. The new heating plant was installed under the addition. In changing the lighting and connecting the new addition, part of the old brick walls were reconstructed which gave the opportunity of bringing the architecture of the old building into some sort of harmony with the new.

The eight addition and alteration projects in Dayton were all variations of the Van Cleve problem. Some of the additions were larger and in some cases the alterations were far more extensive than in the Van Cleve. In every case, however, the typical elementary-school plan was used as a basis for expansion and alteration.

The significant result of Dayton's schoolbuilding program is the fact that the city is now provided with educational facilities to carry out an enriched and expanded school life for all children. Every school child is provided with an environment in tune with the educational program. Aside from this, Dayton's board of education by means of its policies of larger and fewer schools, the work-study-play plan, the juniorelementary combination and the insistence on skillful planning has achieved a reduction in perpupil building cost, thus making a continuation of these far-sighted policies possible in future building programs.

<sup>&</sup>lt;sup>1</sup>Before its abandonment the architectural department of the board of education, headed by Mr. Lloyd, had charge of the planning of the Daniel Kiser and Leota Clark schools and the fireproofing of the Webster school. The local firms participating in the program were the following:

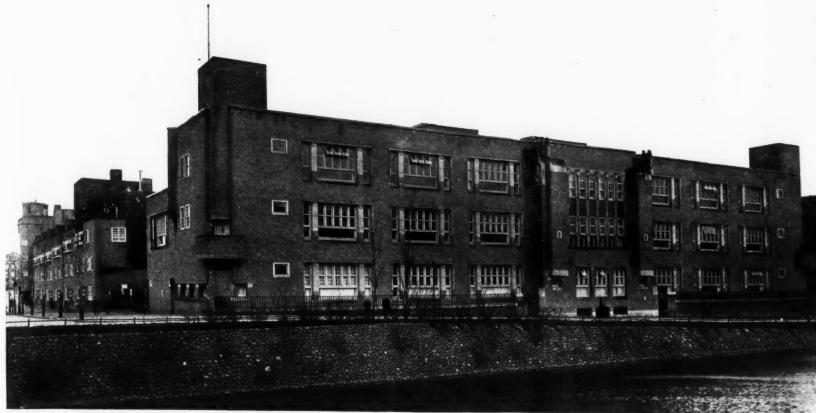
Bruce Lloyd (formerly of the architectural department)—Colonel White School and additions to Franklin, Van Cleve, Cleveland and Irving Schools
Pretzinger and Musselman—Wogaman School.
Gebhardt and Schaeffer—Emerson School, Garfield fireproofing and Ruskin addition.

Herman and Brown—Wilbur Wright and North Dayton elementary schools, and Willard fireproofing. Walker and Norwich—Lincoln Junior High School and Edison and Longfellow additions.

Smith and Chamberlain—Normal Training School and fireproofing of Allen, Weaver and Hawthorne

William McCluer-Washington addition and fire-

<sup>&</sup>lt;sup>2</sup>Although the Kiser school was planned and erected under this program, a part of the appropriation for this school had been set aside from the previous bond issue.



MODERNISM IN EUROPEAN SCHOOL ARCHITECTURE

The modernistic tendencies in architectural design which have led to some most interesting and beautiful as well as original examples of office and industrial buildings have found little application to American school buildings. Apparently our architects have been satisfied to stick to traditional types of architecture, at least for the present. What the future will bring should be particularly interesting if school boards can be shaken out of their habitual conservatism.

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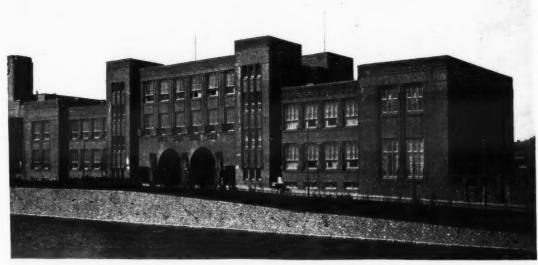
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rected r this issue. The buildings illustrated on this page represent modernistic tendencies in the design of school buildings as worked out in Amsterdam, Holland. The illustration at the top of the page is that of a recently completed secondary school or gymnasium. A unit identical with the one above on the other side of the canal houses a secondary commercial school. The building in the middle of the page is the municipal lyceum and the school at the bottom of the page is one of four vocational schools.

A GYMNASIUM, AMSTERDAM, HOLLAND



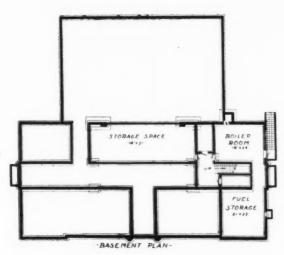
LYCEUM, AMSTERDAM, HOLLAND



A CRAFT SCHOOL IN AMSTERDAM, HOLLAND



COMMUNITY HIGH SCHOOL, BLUE MOUND, ILL.
F. E. Berger and R. L. Kelley, Associate Architects, Champ.



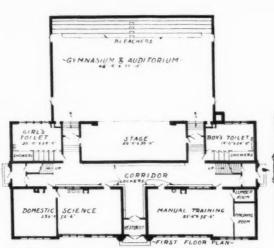
THE BLUE MOUND SCHOOL AT BLUE MOUND, ILLINOIS

The movement for the erection of a new school at Blue Mound, Illinois, was begun in November, 1925, with the approval of a bond-issue proposition by the voters. Twenty-year serial bonds in the amount of \$60,000 were sold to a Davenport bonding house, at five per cent interest, and a good premium. The bond issue was floated without the necessity of an increase in the school tax, and all of the bonds will be retired by 1944. The maximum annual expenditure for interest and principal is \$5,200.

Construction work on the building was started in the early spring of 1926, and the building was completed and occupied in February, 1927.

The exterior walls of the building are of hollow tile, faced with a good grade of facing brick, and the bearing walls are of solid concrete. A basement under a portion of the building provides space for a boiler room, a coal storage room, a main storage room, a janitor's supply room, and a small storage room. All corridors have terrazzo floors; the stairs are concrete, faced with terrazzo, and the toilets have terrazzo floors and marble partitions.

The main building is 56 ft. by 120 ft. by 30 ft., and is placed at one corner of a spacious plot. The building is on one of the main highways and



COMMUNITY HIGH SCHOOL, BLUE MOUND, ILL. F. E. Berger and R. L. Kelley, Associate Architects, Champaign, Ill.

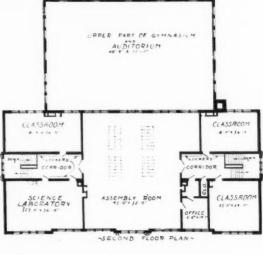
faces east. A gymnasium, 50 ft. by 80 ft., is located in the rear. Situated just outside of the limits of the village of Blue Mound, the building has the use of water from the city water system, and electricity is supplied from the local public-service corporation.

The building was built for a maximum of 200 students, or twice the present enrollment. There are three regular classrooms, in addition to a laboratory, a home-economics department, a manual-training department, and an assembly hall seating 132 persons.

The building was erected at a cost of \$75,000. The equipment cost \$3,000. The small cost of the latter is due to the fact that some of the old equipment in the former building was removed to the new structure.

The building was planned and erected under the direct supervision of Messrs. F. E. Berger and R. L. Kelley, associate architects, Champaign, Ill.

The Blue Mound School maintains a complete staff of seven instructors. Mr. H. W. Bean, the superintendent of schools, is in charge of the new high school and the old grade school. The school board has a membership of five, comprising Mr. L. W. Reis, Mr. W. H. Bean, Mr. R. H. Gray, Mr. E. F. Dunbar, and Mr. E. W. Hartwig.



A SUGGESTION

To the Editor:

Practically all the school buildings illustrated and described in the School BOARD JOURNAL give and described in the School Board Journal give the cost per cubic foot, and in some cases, the cost per pupil is also given. The cost per cubic foot and the cost per pupil should accompany each contribution, but I would suggest that the method employed in determining the cubical contents of the building, and the bases upon which the pupil capacity is determined should accompany these figures. Some of your subscribers, no doubt, are often misled by a seemingly low per-cubic-foot cost, which is based upon an unwarranted large cubical content, determined by some person overanxious to present an attractive low per-cubic-foot cost to the unsuspecting reader.

present an attractive low per-cubic-foot cost to the unsuspecting reader.

The pupil capacity of school buildings stated by architects and school officials is very often incorrect and misleading. If computed on the basis of the seating capacity of each instructional room, it will not represent the working capacity of the building. A slump of from ten to fifteen per cent should be allowed, especially in the high schools, where the number of pupils in each branch of study is constantly fluctuating throught the school year. It is impossible for any high-school principal year. It is impossible for any high-school principal to schedule the classes in his building, in a manner that will fill each department to its capacity every period of the day. Should the per-pupil cost be based upon the seating capacity of each instructional room, or upon the actual working capacity of the building?

W. W. Meyers, of Meyers and Johnson, Architects.

# The Use of Funds for Pupil Transportation

Neal Duncan, Superintendent of Schools, Richmond, Ill. 

The courts have quite generally held that, in the presence of statutes giving the right to transport pupils, school boards have the right to use school money for this purpose and that such uses is constitutional. In some cases argument has arisen over the particular fund to be used rather than over the principle of using the school funds for this purpose. Decisions on this phase of transportation have also involved the questions of equality of educational opportunity, of the sending of children to parochial schools at public expense, as to whether or not a parent may be paid for transporting his own children, and of the power of a school board to substitute board and lodging for transportation when the board thinks that such would be for the best interests of the community.

Diversion of Funds

The right to use money (public funds) for meeting the expense of the transportation of school children to and from the public schools has been frequently upheld.1

In a leading case,2 which is frequently quoted. it has been held that a statute providing for an allowance to be paid from the school funds of the district to the parents of certain children living more than three miles from the schoolhouse, to compensate them for transporting these children. was not unconstitutional and that it did not divert money used by taxation to private and individual uses. This ruling has been followed in substance by practically all of the courts which have ruled on this question of the legality of the use of public funds for transportation. The court of Mississippi is the exception to this general ruling, for it has held3 that a law authorizing the school trustees of a consolidated district to provide transportation for pupils living more than two miles from the school, the expense to be paid out of the county school fund, is not valid as authorizing the diversion of school funds in a purpose not authorized by the constitution, since school funds are to be used "to maintain the schools," and transportation of pupils is an item of expense in conducting schools.

The Use of Funds for Conveyance In Kansas\* the courts have ruled that the board of trustees of a community rural high school were authorized to buy busses to transport pupils to school and to pay the expense of such transportation out of the school funds. However, in Kentucky<sup>5</sup> it has been held that the county board of education can not purchase wagons and employ drivers to transport children to and from school with money raised by a vote of the district under a statute authorizing the tax to be spent "for necessary supplies." In 1912 the Kentucky Court of Appeals stated: "The power of the county board in expending this money is carefully limited by statute and the county board is not authorized to spend it for anything else, for the inclusion of certain things is necessarily the exclusion of all others; and if the board may go beyond the statute there is nothing to guide it and no limit to its authority." This would seem to be good law. The court further stated: "We do not hold that the legislature may not provide for the levying of a tax for this purpose; we only hold that it has not yet done

In other words, a provision of a statute which authorizes the voters of a school district to vote a special tax for school purposes, limits the pur-

This paper is the third of a series of five articles to appear in the JOURNAL on special phases of the problem of school transportation as defined by the courts. The present paper takes up the legal rights of school boards to use funds for pupil transportation. Subsequent papers to appear in later issues during the year will take up contractual relations with drivers and minor problems in the management of school transpor--The Editor.

poses to which it may be expended to those designated by the general statute governing the expenditure of school money.

A Georgia Court<sup>6</sup> has ruled that the transportation of pupils to the public schools rests with in the discretion of the county board of education and that the refusal of this board to continue the transportation of pupils, when such transportation would diminish the school funds belong to other districts, is not an abuse of this discretion. In a somewhat similar case in Indiana7 the court likewise held that, if no estimate of expenses of the transportation of pupils was included in the tax levy and consequently there were no funds on hand for that purpose this was a good defense on the part of the school trustee against whom proceedings were brought to compel such transportation.

In both Georgia<sup>8</sup> and Arkansas<sup>9</sup> the courts have held that those districts operating on local funds cannot transport children to and from school and that such transportation may be furnished only by those districts which receive state funds. It is held in the Georgia case that the county board may use these funds for the purchase of trucks to transport both pupils and teachers before making the equitable distribution of these funds as required by law. This case is the only one found which specifically includes the teachers in the provisions for transportation.

Several Indiana cases<sup>10</sup> hold that in proceedings to compel trustees of schools to furnish transportation for pupils to and from school, it must be shown that the trustees had sufficient money on hand to furnish such transportation to all pupils entitled to the same. That is, it must be definitely shown that the officer had the power to perform the act, in addition to the authority. But the use of public money for transporting children to another district where the payment of tuition is involved is illegal.11 The fact that a district has already raised the money specifically for transportation does not compel the school authorities to furnish transportation. Where a board of education has once committed itself to the policy of furnishing transportation to and from school to pupils, it does not thereby deprive itself of the right to change that policy at a later date.12 This same court has also held, as in previous cases, that where the law gives the board of education power to provide transportation, it is not made mandatory upon the board of education to provide transportation out of the county funds where no tax has been levied for that purpose.

The school board has no discretion, according to a recent decision,13 to extend the statutory power to furnish transportation to school children. The school code authorized the school board

to furnish transportation to and from school to children residing more than one mile from school. The school board, acting on the ground that they were serving the best interests of the pupils of the district, and within their discretion. used school money to pay for the transportation in school busses of pupils of the school to basketball games, baseball, and other athletic contests, oratorical contests, to picnics, to attend a moving picture, to take a class picture, and to visit a reformatory in another city. They also used the school busses and school money to pay for the transportation of their teachers to an educational institute. Some patrons of the district enjoined the use of school money for these purposes. The injunction was upheld on the grounds that the district had exceeded the powers conferred upon them by the statutes. Such being the case, no question as to the use or abuse of their discretion was open, and such use of school funds was illegal. This is in conformity with decisions in other states concerning the extension of stat-

**Equality for Educational Opportunities** 

The principle underlying the provision for transportation is that of providing, as nearly as we may, for the equality of educational oppor-tunity to all children of school age within a district. This principle is well covered in the leading case of Fogg v. the Board of Education of Littleton.14 In giving its decision the court said: "If, for instance, the money required to pay for the transportation of one pupil from a remote part of the district might be used to substantially increase the educational advantages of a hundred other pupils in the town, as by adding a week or two to the length of the year, it is evident that the aggregate educational advantages derived from the school system in the district would be enhanced by expending the money in that way. If the expense of transportation of a single pupil would afford him some substantial benefit, and at the same time would not unreasonably diminish the school advantages of the other pupils in the district, the expense should be incurred. . . . The mere matter of expense does not justify a board in refusing to furnish any transportation." So, under a statute requiring school boards to provide such schools as can give to all the pupils of the district as nearly equal advantages as may be practical, and authorizing the expenditure of the school money for that purpose, a pupil living too remote from the school has no absolute right to transportation, yet the district must furnish him with such transportation as it can without materially decreasing the school advantages of the other scholars in the district.

Entire equality is, however, impossible to attain and a great deal must be left to the discretion of the school board in whose hands the administration of the transportation is placed. "The differences in the number of scholars to be provided for, and the means available for the various demands of the work, in the proximity of school and the condition of the roads, and in the age and strength of the scholars, are such as to induce a belief that absolute rules would be more likely to work injustice than the exercise of official discretion." And unless intentional discrimination can be shown on the part of the school board, mandamus will not lie to compel transportation where the act of the legislature is permissive in character.15

It has been held16 that the transportation of a crippled child, living less than one mile from

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<sup>\*</sup>Douglass et al v. Board of Education of Johnson County et al, (1827), 138 S. E. 226, 164 Ga. 271.

\*Dunten v. State ex rel Emrich et al, (1909), 87 N. E. 733, 172 Ind. 59.

\*McKenzie et al v. Board of Education of Floyd County et al, (1924), 124 S. E. 721, 158 Ga. 892.

\*Hendriz v. Morris et al, (1917), 91 S. W. 949, 127, Ark. 222.

Ark. 222 ex rel Taylor v. Whetsel et al, (1926), 150 N. E. 766; 197, Ind. 278. State ex rel Crow v. Etchinson et al, (1912), 99 N. E. 996; 178. Ind. 592. Waters v. State ex rel Neff et al, (1909), 88 N. E. 67; 172,

son et al, (1912), 99 N. E. 996; 178. Ind. 592. Waters v. State ex rel Neff et al, (1909), 88 N. E. 67; 172, Ind. 251.

"Board of Directors of School District of Gould et al v. Holdtoff, (1926), 285 S. W. 357; 171, Ark. 668.

"Gragg v. County Board of Education of Fayette County et al, (1923), 252 S. W. 137, 200 Ky. 53.

"Schmidt et al v. Blair et al, (1927), 213 N. W. 593, 203 Iowa 1016.

<sup>&</sup>lt;sup>14</sup>Fogg v. Board of Education of Union School District of Littleton, (1912), 82 Atl. 173, N. H. 296. <sup>15</sup>Carey v. Thompson et al, School Directors, (1894), 30 Atl. 5, 66 Vy. 665. <sup>16</sup>Berry v. School Board of Barrington, (1915), 95 Atl. 952, 78 N. H. 30.

<sup>&</sup>lt;sup>1</sup>A. Shanklin v. E. T. Boyd et al. (1912). 142 S. W. 1041, 146 Ky. 460, 38 R. A. N. S. 710. Bufkin Chancery Clerk v. Mitchell, (1913), 63 So. 458, 196 Miss. 253, 50 L. R. A. N. S. 428.

<sup>2</sup>School District No. 3, Achinson County, v. Atzenweiler, (1908) 73 Pac. 927, 67 Kan. 609.

<sup>2</sup>Bufkin Chancery Clerk v. Mitchell, (1913), 63 So. 458, 106 Miss. 253.

<sup>3</sup>State ex rel Palmer County Attorney v. Crugan et al. (1926), 243 Pac. 329, 120 Kan. 316.

<sup>5</sup>Collins v. Henderson. (1874), 11 Bush (Ky.). 74 Ky. 74. S. A. Shanklin v. E. T. Boyd et al. (1912), 142 S. W. 1041, 146 Ky. 460.

school, would be incurring an expense that would substantially decrease the educational advantages of the other children of the district and so could not be done since the provisions of the statutes regarding the transportation of crippled children were general. It is well worth remarking that this was the only child living in that particular direction from the school so that its transportation required the employment of another driver or the inconvenient re-routing of another conveyance with subsequent inconvenience to several children. If there had been other children living in that direction for whom transportation must have been provided, undoubtedly this decision would have been different.

Where the transportation act is permissive in nature, it is within the discretion of the school board to furnish transportation to children living too far from the school to attend otherwise, if there is a sufficient number of such children, and the board has the authority to furnish transportation which it might not have in the case of single, isolated pupils.17

In a case<sup>18</sup> where a parent lived with his children on an island upon which no school was kept, situated about four miles from the island of Martha's Vineyard where there were adequate accommodations for his children, it was held that the town was not obliged to maintain a school on the island inhabited by the parent and his family or to furnish transportation for his children to Martha's Vineyard. What arrangement should be made for the education of the children lay within the discretion of the school board. This decision follows that of a very similar and previous case in the same state.19

Although a district meeting has power to provide by tax or otherwise for the transportation of children of school age, yet where a school is maintained in the district and the parents are able to furnish transportation, in case the distance is too great for the children to walk, the legal obligation to furnish such transportation rests upon the parents rather than on the district.20 Several decisions, however, are contrary to this holding. One of the most noted is one from South Dakota.21 Here the court held that the board of education must furnish room and board near the school for children living too far, or in places too inaccessible, to be transported

#### **Parochial Schools**

Very few decisions can be found concerning the use of public money to furnish transportation to parochial or private schools. And the two cases that consider the question, though somewhat dissimilar in nature, are contradictory in their findings.

The public school of a district was closed by a vote of the district which also voted to send, or transport, its children to De Pere, Wisconsin. Two of the 27 pupils transported attended the public school and 6 took some work at the public school, two periods a day of manual training and 4 taking domestic science for the same length of time. Since the contract called for the transportation of 30 pupils and only a part of the total number attended the public school, the contract was declared invalid, the court holding that a school may not use public funds to transport children to a parochial school even though a part of those attend a public school to which the vehicle is driven, for, from the face of the contract, it was evident that the board of education did not intend the contract to be limited to the transportation of children to the public school.

Money raised by taxation for public purposes may not be diverted to private uses.22

A stipulation in a franchise to a street railway company that tickets for the use of public school children shall be furnished at a reduced rate has been held to apply not only to children attending a private school maintained by private benevolences and for the benefit of the public. The court further holding, ". . . . The public schools of said city include the public schools of said city whether maintained by the public by taxation or by private agencies for the public by private benevolences."23 This is a view not commonly held and it might be submitted that the law in the former case is the better.

#### Payment of Parent for Transportation

It is quite generally held that a board of education need not furnish the actual conveyance of pupils in their district in school conveyances driven by hired drivers, but that in lieu of so doing they may allow a reasonable compensation to parents of children and, further, if boards of education are required by statute to offer transportation and do not do so that the parents may transport their children to and from school and recover for such transportation at a reasonable or specified rate.24

"Provision for compensation of parents or guardians transporting children living two or more miles from school is a beneficient statute in the interest of education and it is to be construed liberally to accomplish the purpose intended."24

A statute providing for the transportation of pupils of a consolidated district does not deprive children or guardians of any constitutional right merely because the option as to furnishing transportation or paying compensation therefore lies in the discretion of the school authorities or in the judgment of the people through election. 25

Under an Ohio statute, if the township board of education fails to perform its duty to provide work in high-school branches within four miles of the residence of children of compulsory school age and of high-school grade, the county board of education is required either to provide such work or to make it accessible to the children by transportation. The township board of Riley, Putnam county, having failed to provide highschool work within four miles of the residence of one Sommers, who had four children of high-school grade, he requested the county board either to provide such work or to provide his children with transportation to a school where such work was offered. The county board failed to do either, so Sommers, himself, transported his children to and from high school daily during the school year and then sued the township and county board for the value of his services The case went to the supreme court, which held that he was entitled to recovery.26

The mere neglect on the part of the school authorities to furnish transportation for school children constitutes grounds for a parent to recover for his services rendered in transporting his children to the nearest "properly equipped school within the district by the nearest public or lawful traveled route."27

Where a school board decides that a parent lives in such an inaccessible location that it is impracticable for the bus to go to his residence and so elects to pay the parent cash, it must pay at least the minimum prescribed by law for each child, though several are attending from the same family.28

Where a statute provides that a school board, instead of furnishing transportation for pupils

living more than three miles from the school house, may allow as compensation for conveyance to the parent or guardian not less than a certain sum per day, it contemplates at least that sum per day for each child conveyed though several belong to the same family.29 A school board may, also, provide transportation for a part of the pupils of the district and make a money allowance for the rest. This lies within the discretion of the school board.30 But statutes allowing parents a limited sum for conveying their children to and from school are to be strictly though liberally construed, and to recover from a district the parent must show a literal compliance with the statute, so that when he transports his children to another district without the consent of his district of residence, as required by law, the district of residence will not be held liable.31

It has been held32 that a parent who brings suit against a board of education that has failed to provide transportation when required to do so by statute is not required to show the number of days that he actually transported the child in order to be entitled to recover. It is a question for the jury which needs only to determine probabilities from all competent evidence.33 But a parent is not entitled in recovery for transportation to compensation for those days that the child attended school when not transported.33

#### Provisions for Board or Lodging

Many statutes provide that instead of providing transportation facilities, a board of education may offer board or lodging, or both, at some convenient place near to the school. This seems so reasonable that but few cases have been argued on this point. In the principal case34 covering this particular phase of transportation, the court held that other means of providing educational facilities for children living long distances from school were permissible and held it mandatory that the board of education furnish board and room to children living too far from school to be transported to and from school daily.

In general, we may say that the use of public funds to defer the cost of transporting children to and from the public schools is justified and legalized on the grounds that we are endeavoring to provide for an equality of educational opportunity to all of the children in the district, the rural as well as the urban. Such use of public funds is not devoting them to private and individual uses, but the funds cannot be used for other than the purposes specified and may not be used for the transportation of children other than to and from school though, when required by statute, no transportation may be refused because of the single matter of the expense involved. To justify such refusal, it is necessary to show that the provisions for transportation would materially and decidedly decrease the school advantages of the other scholars in the district. Furthermore, where authorized, it must usually be shown that there is sufficient money on hand, or that a sufficient tax has been levied. to provide for the transportation of all the pupils entitled to such conveyance before the board of education can be required to furnish the same, and the fact that a district has already raised money especially for the transportation of its pupils does not compel the school authorities to provide it. Where a board of education has committed itself to the policy of furnishing transportation, it does not, by such action, deprive itself of the right to change that policy of a later date. Again, public money may not be advisedly

<sup>&</sup>lt;sup>17</sup>Cross et al v. Fisher et al, (1915), 177 S. W. 243, 132 Tenn. 31.

15Davis v. Chilmark, (1908) 85 N. E. 107, 199 Mass.

 <sup>&</sup>lt;sup>19</sup>Davis v. Chilmark, (1908) 85 N. E. 107, 199 Mass.
 112.
 <sup>19</sup>Newcome v. Inhabitants of Rockport, (1903), 66 N.
 E. 587, 183 Mass. 74.
 <sup>20</sup>Education Department, Opinion, (1921), 24 St.
 Dept. (N. Y.) 445.
 <sup>21</sup>Mendenhall v. Slim Buttes District No. 4, Harding County, (1923), 196 N. W. 96, 47 S. D. 94.

<sup>28</sup>tate ex rel Van Straten v. Milquet, School Treasurer, (1923), 192, N. W. 392, 180 Wis. 109.

20klahoma Railway Company v. St. Joseph's Parochial School, (1912), 127 Pac. 1087, 33 Okla. 755.

24Andrews v. School District No. 1. Town of Knapp, (1924), 197 N. W. 813, 197 Wis. 813.

28eiter v. Gelhar et al, District School Board, (1926), 209 N. W. 376, 54 N. Dak. 245.

24Sommers v. Putman County, Board of Education, (1925) 148 N. W. 682, 113 Ohlo St. 177.

21Eastgate v. Osago School District of Nelson County, (1919), 171 N. W. 96, 41 N. Dak. 518.

29Park v. Klaney, Director, et al, (1926), 245 Pac. 1021, 121 Kan. 41.

<sup>&</sup>lt;sup>20</sup>Waits v. Kelley, et al, School Board, 1925, 236 Pac. 827, 118 Kan. 751.

<sup>20</sup>Harkness, v. School District No. 3. Ness County, et al, (1918), 175 Pac. 386, 103 Kan. 573.

<sup>23</sup>Harris v. School District No. 48 of Pennington County, (1913), 143 N. W. 898, 32 S. Dak. 544.

<sup>23</sup>Board of Education of Swan Township v. Cox, (1927), 159 N. E. 479.

<sup>23</sup>Monke v. Iowa School District No. 3, of Hettinger County, (1926), 215 N. W. 284, 55 N. Dak. 819.

<sup>24</sup>Mendenhall v. Slim Buttes District No. 4, Harding County, (1923), 196 N. W. 97, 47 S. Dak. 94.

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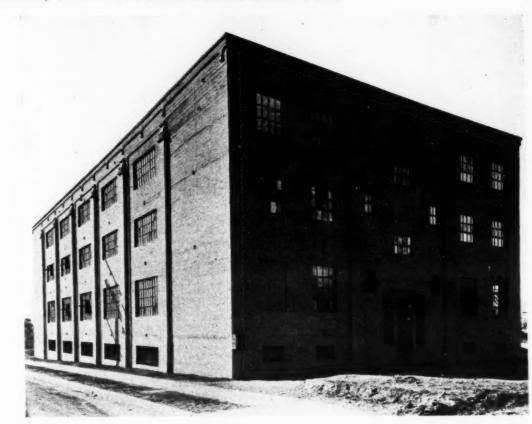
## The Central Warehouse of the Pasadena City School System<sup>1</sup>

Henry G. Lehrbach, Consultant in School Business Administration

In order to provide adequate facilities for the storage of supplies for instruction, and for school-building operation and maintenance, the Pasadena board of education has built a modern fireproof central warehouse. As the Pasadena school system embraces 32 schools with an enrollment of approximately 17,000 pupils and a four-teen-year program, the cost of the supplies and equipment required during a year amounts to a large sum. During the year 1927-28 the total value of all supplies and equipment purchased was approximately \$200,000.

For several years all necessary supplies had been stored in a small brick building, and the surplus had been scattered in vacant school-rooms throughout the city. This scattered storage resulted in excessive handling expense as well as considerable inefficiency in delivery and inventory. It was impossible to control the stock or shipments under such conditions, and those responsible for the service of furnishing the supplies to the schools were severely handicapped.

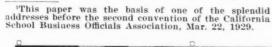
Much interest in the project of a central warehouse was manifested by the school executives who are primarily responsible for the educational activities of the system. They realized that the delays experienced in the purchase and delivery of many items would be eliminated if these articles could be carried in stock or purchased and held in storage until needed. Teachers could visit the central warehouse and learn the exact



CENTRAL WAREHOUSE OF THE PASADENA CITY SCHOOLS, PASADENA, CALIF.

type and quality of materials which had been provided and plan their work with standard stock items. Supervisors and directors under the

supervision of the superintendent could set up instruction programs for the system as a whole, and make arrangements to have supplies and

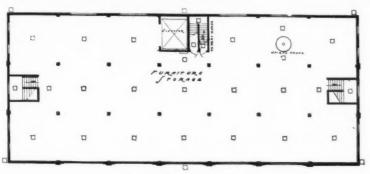


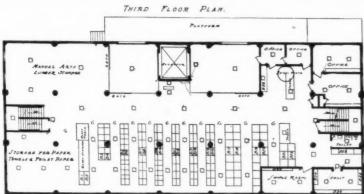
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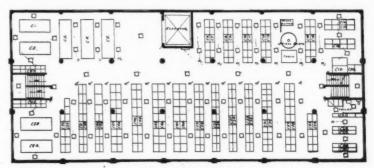
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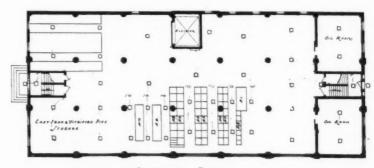




FIRST FLOOR PLAN.



SECOND FLOOR PLAN



BASEMENT PLAN

FLOOR PLANS OF CENTRAL WAREHOUSE OF THE PASADENA SCHOOL SYSTEM, PASADENA, CALIF.

	SCHEDULE OF SHELVING STORING RACKS IN WAREHOUSE	B11. B12. B13.	Plumbing Supplies Plumbing Supplies Manual Training Supplies	C8. C9. C10.	Book Storage and Office Supplies Book Storage and Office Supplies Book Storage and Office Supplies	C34. C35. C36.	Practice Paper Practice Paper Practice Paper
	BASEMENT	B14.	Manual Training Supplies	C11. C12.	Book Storage and Office Supplies	C37. C38.	Drawing Paper
A1.	Tire Rack	B15.	Miscellaneous Supplies	C13.	Book Storage and Office Supplies	C39.	Drawing Paper Typewriter Paper
A2. A3.	Paint, 5-Gal Stock	B16.	Hardware	C14.	Book Storage and Office Supplies Book Storage and Office Supplies	C40.	Typewriter Paper
A4.	Miscellaneous Plumbing Supplies	B17. B18.	Shipping Bins Shipping Bins	C15.	Book Storage and Office Supplies	C41.	Athletic Supplies
A5.	Soil Fittings Soil Fittings	B19.	Shipping Bins	C16.	Book Storage and Office Supplies	C42.	Reserved
A6.	Soil Fittings	B20.	Shipping Bins	C17.	Book Storage and Office Supplies	C43.	Composition Books
A7.	Soil Fittings	B21.	Shipping Bins	Č18.	Book Storage and Office Supplies	C44.	Drawing Paper
A8.	Soil Fittings	B22.	Shipping Bins	C19.	Map Rack	C45.	Envelopes
A9.	Future	B23.	Book Store	C20.	Dowel Rack	C46.	Art Supplies
A10.	Future	B24.	Vault Storage	C21.	Office Supplies	C47.	Art Supplies
	FIRST FLOOR	B25.	Vault Storage	C22.	Office Supplies	C48.	Domestic Science Supplies
B1.	Future	B26.	Vault Storage	C23.	Office Supplies	C49.	Medical Supplies
B2.	Future	B27.	Future	C24.	Office Supplies	C50.	Domestic Science Supplies
B3.	Hardware	B28.	Future	C25.	Office Supplies	C51.	Cafeteria Supplies
B4.	Hardware		SECOND FLOOR	C26.	Office Supplies	C52.	Cafeteria Supplies
B5.	Electrical Supplies	C1.	Reed Rack	C27.	Caretakers' Supplies	C53.	Cafeteria Supplies
B6.	Paints	C2.	Paper Stock and Printing Supplies	C28.	Electrical Light Globes	C54.	Drawing Board and Miscellaneous
B7.	Paints	C3.	Paper Stock and Printing Supplies	C29.	Caretakers' and Miscellaneous	C55.	Future
B8.	Paints	C4.	Paper Stock and Printing Supplies	C30.	Construction Paper	C56.	Caretakers' Supplies
B9.	Garage and Machine Shop	C5.	Paper Stock and Printing Supplies	C31.	Construction Paper	C57.	Art Department
****	Supplies	C6.	Book Storage and Office Supplies	C32.	Construction Paper		THIRD FLOOR
B10.	Plumbing Supplies	C7.	Book Storage and Office Supplies	C33.	Construction Paper		Furniture Storage

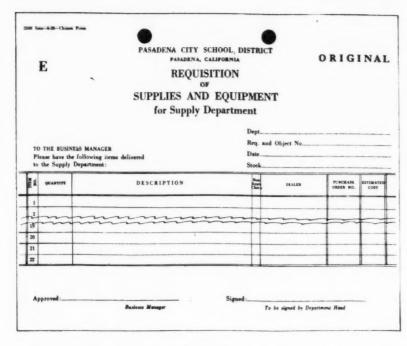


FIG. 1

REQUISITION ISSUED BY PRINCIPALS AND DEPARTMENT HEADS FOR SUPPLIES AND EQUIPMENT. THE FORM MEASURES 8 BY 11 IN. IN SIZE, AND IS PREPARED IN TRIPLICATE.

equipment available to meet the needs of the curriculum.

A modern building of proper size and arrangement would enable the board of education to purchase at one time sufficient materials to last throughout the school year. Much labor and expense in purchasing, handling, accounting, and paying for standard stock items would be saved. The necessity for seasonal buying would be eliminated, insuring better prices and more prompt delivery. At the same time purchases of annual supplies during the summer months at two prices would be avoided. The purchasing agent, by more careful buying at a time when manufacturers and dealers offer better service, could obtain various classes of supplies throughout the different months of the year and in effect level the curve of buying.

In planning the warehouse a great deal of research and investigation was necessary in order that the building would successfully meet the particular needs of the school districts, both present and future. Studies were made of commercial and government warehouses as well as similar buildings in other school districts.

The new building is a reinforced concrete structure 140 ft. long, 60 ft. wide, with a 10-ft. shipping platform, three floors and a basement. It provides approximately 33,000 sq. ft. of storage space. It is of flat slab design, erected in accordance with the best modern practice in warehouse construction, and is as nearly fireproof as is possible to build. All sash are factory type, glazed with wire glass. All doors are steel or metal covered. The first floor is designed to carry a load of 200 pounds per square foot; the second floor, 150 pounds; and the third floor 125 pounds. The ceiling heights are: Basement, 10 ft., 3 in.; first floor, 9 ft., 3 in.; second floor, 11 ft., 3 in.; third floor, 7 ft., 9 in. Exclusive of the land, but inclusive of the architects' fees and inspection costs, the building cost \$60,652.79.

A modern type of steel shelving has been installed throughout the building at a cost of \$10,060.45. Although the sizes and arrangements of the bins were special, stock materials were used. The type of shelving selected when bids were taken, was considered most suitable because it is built of small structural members—tees, angles, channels, and sheets. It is exceptionally well designed and assembled, easily adjusted, and thoroughly braced. It was tested to a load of 250 lbs. per sq. ft. The shelving is considered as permanent and adequate for storage purposes as the building itself.

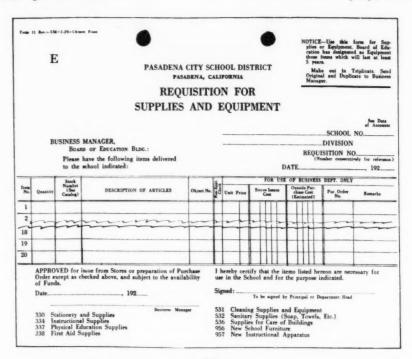
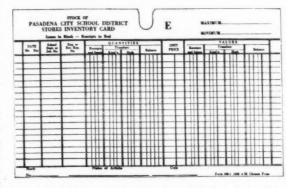


FIG. 2
REQUISITION FOR STOCK, SUPPLIES, AND EQUIPMENT. ON THE DUPLICATE AND TRIPLICATE THE SPACE AT THE BOTTOM IS OCCUPIED BY SPECIAL FORMS FOR RECEIPTS.

An electric elevator measuring 10 by 12 ft. serves all floors. It was planned especially for the moving of furniture and large equipment to the top floor. The elevator has a capacity of 4,000 lbs. and a speed of 40 ft. per minute. It is controlled entirely from within the car. The doors are of the guillotine type. To facilitate the transfer of small packages from the second and third floors to the packing and shipping area on the first floor, a steel spiral chute was installed.



STOCK RECORD. ORIGINAL MEASURES 5 BY 8 IN. FIG. 3

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Name of School or Days.			Organ, No
To tex Business Manager. Place have the following	work performed.		Date
Reson:		Date required	
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BITDLATED COST BION WORK	DO NOT WATE BLOW YOR LOIL FOR U	Reported by	7 COR Y.
BETSMATED COST	BO NOT WATTS BELOW THAN LINE. BOR LO NOTE.  Use separate closer for each lower of v Humber regulations consecutively and a copy at the school.	Reported by	CUTIEDE CROSS
mor woke	DO NOT WATE BLOW YOR LOIL FOR U	Reported by	Chies No.
BITDLATED COST BION WORK	BO NOT WATTS BELOW THAN LINE. BOR LO NOTE.  Use separate closer for each lower of v Humber regulations consecutively and a copy at the school.	Reported by	CONT.  CUTTEDE ORDER.  Client No.  Purchase Order No.

REQUISITION FOR REPAIRS OR REPLACEMENTS. ORIGINAL MEASURES 5 BY 8 IN. FIG. 4

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FIG. 5

Orders are assembled on the upper floors and conveyed by gravity to the shipping bins on the first floor. Offices for the storekeeper, shipping and receiving clerks, and also the stock book-keepers are in one corner of the first floor. A fireproof vault for the storage of valuable records and special items, as well as a sample room for samples sent in with proposals, are provided.

All purchases made for any school are delivered to the warehouse and are then sent to the schools on the regular delivery days. Materials are received in a screened-in bay by the receiving clerk, whose office is immediately adjacent. Here they are checked with the purchase order, examined and then sent either to the shipping bins or to the stock shelves. All requisitions sent in by the schools are filled by assembling the materials in bins on the first floor. Here they are boxed and then transferred to the shipping bay from which shipments are actually made. The receiving and shipping bays are adjacent to the elevators to facilitate the handling of furniture.

Particular planning was required for the installation of the lighting. The plans for the shelving were made before the plan of the lighting system was developed, so that lights could be installed in each aisle between the rows of shelves. Each aisle is controlled by a pull cord adjacent to the main aisle so that each row of lights can be turned on and off as needed.

Approximately 5,400 separate items are carried in stock for immediate issue. The value of this stock averages \$110,000 during the different months of the year. All supplies and equipment are purchased under the capital-outlay account and when issued this account is credited and the proper expense is charged. All stock is owned by either the high-school district or the elementaryschool district of Pasadena, but a particular item is stocked in only one district. If the high-school district needs an article carried by the elementary-school district, it is purchased from their stock, and vice versa. This arrangement enables the board of education to carry a minimum of stock, and avoids much duplication and expense which existed under the former arrangements.

When requisitions are approved for stock issue, each item is entered on the card record (Fig. 3). A perpetual inventory is carried on these cards and indicates the amount and value of each item on hand, the receipts and the issues. In fact, a complete history of all transactions in this item is recorded and this provides valuable data for future purchases, research, and supervision. A card file for each school showing the

(Concluded on Page 147)

## Allotments and Costs of Janitorial-Engineering Supplies

John Guy Fowlkes, C. J. Anderson, and Lee F. Jones, University of Wisconsin

The Problem of Janitorial-Engineering Supplies. One purpose of this study is to determine current practices in the matter of unit amounts and costs of supplies used in the janitorialengineering department. Here, as in the case of instructional supplies, it is comparatively easy to arrive at total costs, but similarly, it has not been possible to obtain complete data as to unit allotments and costs. It is obvious that a study of this nature will be of real value to the extent that data are completely available. The average daily attendance is the best unit to use in the matter of these supplies. It should be accompanied by the amounts and costs of the individual items on the list of such supplies, and by a check as to which items are not used.

The Cost of Janitorial Supplies. The questionnaire used in this study provided for the inclusion of the data mentioned above, but the answers reveal that in many cities there is a lack of detailed accounting for supplies, which lack has made it impossible to get complete data. Thirty cities representing 18 states, every geographical section being represented by one or more of them, gave data from which Table I has been compiled. It is not argued that this list is in any sense an ideal criterion for use in arriving at the adequacy and efficiency of the janitorial program of any specific city. However, until a better criterion is evolved, we shall be forced to accept as being somewhat valid, the average judgment of a considerable number of school systems, which systems represent various sections of the country as well as various sizes of systems.

alone, when compared with the average per capita for this item, amounting to \$ .082 per capital per average daily attendance. The allotment of hand soap being one half of the average allotment, there is an additional saving of \$ .014 per capita. The saving in disinfectant is \$ .006. Altogether, it is possible to show from the data furnished, that the low per capita per pupil of \$ .17 for janitor supplies, is the result of a very meager list of supplies, and low per capita amounts allotted. If this city used the average per capita amounts of paper towels, soap, and disinfectants, its per capita average daily attendance cost for janitor supplies would be raised from \$ .17 to \$ .272 on these items alone.

City 29 has a janitor supply list of seventeen items only. Here again, practically no paper towels are supplied, the saving being \$ .10 per capita average daily attendance. The saving in hand soap is \$ .013, in disinfectant \$ .002 and in furniture polish \$ .031. The total saving in these four items is \$ .146 which would raise the per capita of that city from \$ .18 to \$ .326.

City 27 saves \$ .051 on brushes, toilet paper, hand soap, and disinfectant, the actual per capita of \$ .25 being raised to \$ .301 by the inclusion of average amounts of four articles.

By using no furniture polish and by using one third of the average amount of paper towels, City 25 is enabled to save \$ .08, which, if added to the actual per capita, raises it from \$ .26 to \$ .34. At the same time City 26 saves \$ .10 per capita on soap, towels, brushes, and disinfectant. City 24 saves \$ .11 on towels, soap, and furniture polish.

	TABLE I. COST OF	F JANITORIAL-EN Cost of	NGINEERING Cost per	SUPPLIES IN	THIRTY CITIE	Ave.
Cities	A. D. A.	Supplies	A. D. A.	A. D. A.	Supplies	A. D. A
Cities	659	\$ 735.80	\$1.11	44. 40. 44.	cuppites	43. 10. 44
	557	593.75	1.07			
3	317	267.40	8.4			
9	927	678.75	.84			
**	827	550.00	.67			
0	10.419	6.890.00	.66			
0	7.869	5,000.00	.64	21.575	\$14,715	\$.682
	900	507.80	.56	21,010	613,110	φ.00≥
6		808.92	.56			
9	1,436		.55			
10	7,509	$\frac{4,097.03}{360.78}$	.50			
11	720		.50			
12	22,860	10,172.00	.44			
13	15,373	6,600.00	.43			
14	231,383	94.867.03	.41	007 070	400 070	44.5
15	16,869	6,566.19	.39	297,050	123,970	.417
16	5,808	2,169.67	.37			
17	1.747	633.93	.36			
18	22,978	8,050.00	.35 .35 .32 .32			
19	6,698	2,200.00	.33			
20	2,566	832.64	.32			
21	3,811	1,281.35	.32			
22	2.156	677.70	.31			
23	23,014	7,000.00	.30	68,778	22.845	.332
24	13,671	3,886.33	.28			
95	8,296	2,144.00	.26			
26 27 28	7.194	1,820.11	28 26 25 25 20			
27	42,836	10,759.37	.25			
28	12,410	2,537.19	.20			
29	8,596	1.541.82	.18			
30	26,324	4.553.65	.17	119,327	27,242	.226

The median cost per pupil in average daily attendance is found to be \$ .38, the average cost on the same basis is \$ .37, while the average of the middle 50 per cent is \$ .40.

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The quartile points are established and this allows us to apply the "zone of safety" as defined and used by Bobbitt.¹ It seems reasonable to believe that the middle 50 per cent of the cities will give a fair approximation as to what is standard in current practice. The inference from the "zone of safety" argument is that cities having per capitas above \$ .60 and below \$ .30 may well inquire as to the reasons why their average daily attendance costs fall in the upper and lower quartiles respectively.

Fortunately, the data as given allow us to arrive at some conclusions as to why some of the cities in the upper and lower quartiles fall into these groups. With one exception, in which case the data are not given in detail, cities in the first lower quartile couple low per capita allotments and short lists of janitor supplies. City 30, although a city of over 100,000 population, furnishes practically no paper towels, the saving

These comparisons are not offered as proof that those cities are spending too little for sanitary supplies, but are cited to show that these school systems may well ask themselves whether adequate supplies of this nature are being furnished. Naturally, if there is adequacy in these respects in these cities, there must be gross waste in the majority of the cities studied.

At the other extreme, City 1 has double the average per capita for brushes, floor oil, and paper towels, seven times the average for disinfectant and three times the average for sweeping compound and toilet paper. On account of these items alone, \$ .45 could be subtracted from the per capita average daily attendance which would leave the per capita of \$ .65. In like fashion, the data from the other cities of the upper quartile indicate that a very liberal policy prevails in the matter of furnishing janitor supplies. These cities may well ask themselves whether too much is not being spent in this department.

Janitorial Supply Allotments. Of the cities listed in Table VI, 20, ranging in average daily attendance from 317 to 42,836, answered the questionnaire in detail, giving the amounts used

and the cost of each item on the list of janitor supplies submitted in the questionnaire. From these answers it has been possible to compute the per capita average daily attendance per year allotments for each article and the per capita average daily attendance cost per year of the same for each city. The average daily attendance allotments and unit costs have been computed and these appear in Table II. That these data are fairly representative of the larger group studied, is evidenced by the fact that the 20 cities are distributed in the quartiles of Table I as follows: Four in the upper quartile, six in the second quartile, five in the third, and five in the first.

In this table, the unit quantity is the unit of distribution, the cost per unit is the cost of one unit quantity, and the per average daily attendance allotment is the number of unit quantities allotted per pupil in average daily attendance per year. For instance, the unit of distribution of toilet paper is the case, the cost of one case is \$8.77, and the allotment is one case per each 278 pupils in average daily attendance.

TABLE II. PER A.D.A. ALLOTMENT AND UNIT COSTS OF JANITOR SUPPLIES

	Unit	Cost	Per A.D.A.
	Quantity	per Unit	Allotment
Bon Ami	Dozen	\$1.08	1/925
Brooms, Corn	Each	.78	1/150
Brushes, Floor-12-in		3.08	1/250
Brushes, Floor-14-in	Each	3.63	1/215
Brushes, Floor-16-in	Each	3.98	1/146
Brushes, Floor-18-in	Each	4.68	1/520
Brushes, Floor-20-in	Each	6.50	1/375
Brushes, Floor-24-in	Each	7.25	1/475
Average all Brushes*		4.00	1/80
Cheesecloth		.48	1/33
Chloride of Lime	Pound	.12	1/80
Cleaning Compounds	Pound	.13	1/23
Disinfectant		1.25	1/145
Electric Light Bulbs	Each	.50	1/14
Floor Oil	Gallon	.49	1/25
Furniture Polish	Gallon	1.25	1/34
Kerosene (Cleaning)	Gallon	.16	1/111
Lubricating Oil	Gallon	.24	1/540
Mops, Floor	Each	.50	1/54
Paper Towels	. Carton	3.98	1/37
Pipe Cleaner	. Pound	.54	1/240
Soap, Liquid		.51	1/40
Soap, Powder	. Pound	.07	1/6
Soap, Soft	. Pound	.10	1/11
Sweeping Compound.	. 100 lb.	1.57	1/238
Toilet Paper	. Case	8.77	1/278

\*Total cost of all brushes divided by the total number of brushes to give average unit cost. Total number of brushes divided by total A.D.A. to give per A.D.A. allotment.

From the total costs of the various supplies used, it is possible to compute per capita average daily attendance costs per year. The list of the more important items appears in Table VIII. The 18 articles of this list are arranged in the order of relative cost per year per pupil in average daily attendance.

TABLE III. IMPORTANT JANITOR SUPPLIES AND COST PER YEAR PER PUPIL IN A.D.A.

Articles	Cost per A.D.A.	Articles	Cost per A.D.A.
Paper Towels	\$.108	Soap, Soft	\$.009
Floor Brushes	.05	Disinfectant	.008
Toilet Paper	.031	Sweep'g Compound	.006
Light Bulbs	.036	Cleaning Compound	.006
Furniture Polish	.030	Brooms	.005
Soap, Toilet	.020	Lubricating Oil	.003
Floor Oil		Chloride of Lime	.002
Dust Cloth	.016	Kerosene	.001
Mons	.009	Bon Ami	

The total costs of the items appearing in the list of Table III aggregate 70 per cent of the total spent for janitor supplies in the twenty cities. The remaining 30 per cent of the cost is made up of a group composed of a large number of small and scattered items not used uniformly enough in the cities studied, to make it possible to derive tentative standards such as have been derived for the 18 items in Table III.

Using the average per capita costs per average daily attendance per year of Table III, the costs of janitorial-engineering supplies for a city having an average daily attendance of 10,000 are given in Table IV.

(Continued on Page 147)

<sup>&</sup>lt;sup>1</sup>Bobbitt. High School Costs, pp. 505-534.



# School Board Journal

WM. GEO. BRUCE WM. C. BRUCE

**EDITORS** 

### EDITORIAL

### REORGANIZATION OF SCHOOL ADMINISTRATIVE UNITS

In recent years it has become quite apparent that the matter of school support rests in large part upon the size of the school unit to be administered. The weakness of the smaller and the strength of the larger come definitely into play. The essential factors are financial vitality on the one hand and economical control on the other. The unit must be sufficiently robust to insure both.

In the industrial field it has long been clear that the producing plant must be conducted upon a certain unit basis before it can become either efficient or profitable. It loses money if it is too small and may become equally unprofitable if it is too large. There is a unit size which cannot be ignored if satisfactory results are to be obtained. And what applies to the industrial field applies in a similar degree to the educational.

It is with this thought in mind that the new United States commissioner of education, Dr. William J. Cooper, approaches the problem of school administration as applied to this country. He begins by holding that the little country schoolhouse should be discarded. That is, of course, quite logical. But he necessarily goes to the full length of the reasoning that a school unit must be sufficiently large to sustain itself.

The following paragraphs taken from his recent public utterance open a viewpoint that deserves the attention of all those concerned in the progress of popular education in this country. Dr. Cooper says:

"We need a unit of administration much larger than that served by the one-teacher school. The area of administration should be large enough to support a complete school unit, elementary and secondary.

"To offer such educational opportunities, without undue hardship on the taxpayer, a district of large area is obviously needed. In some states such a unit probably exists in the county. If so the preparation of a law is simple, although political influences will doubtless oppose its passage.

"If however, the county area is very large or county lines exist primarily for defining jurisdiction of courts, or possess mainly historical significance, new units must be established. This unit, I believe, should be a real community unit, and its center should be the place where adults shop, go to church, attend lodge, etc.

"We need a new plan of school finance. Ability to support governmental agencies, and especially schools, is no longer adequately measured by the general property tax. This appears to call for a large unit—probably a state unit—if just and fair taxes are to be levied. The law which levies the tax must, of course, provide the machinery for handling and apportioning the funds."

The transition from a series of small ungraded country schools, scattered over a wide territory, to the full graded consolidated school centrally

located with pupil transportation, is going on steadily and irresistably. It is constantly combatted upon the theory that the school is thus removed from an immediate local control. The benefits derived, however, through the larger unit and intensified efficiency secured through the same, refutes the arguments that have been raised in behalf of the smaller unit.

The new United States Commissioner of Education may well turn his attention to the question of such school units as shall give promise of a maximum of administrative efficiency. The equitable distribution of state support is in itself an important consideration, but the question of proper units involves in an important degree the ultimate measure of school support and the manner of school administration.

### SCHOOL ADMINISTRATION IN AMERICA'S TWO LARGEST CITIES

There is a tendency on the part of the smaller school unit to note the school administrative operations of the larger unit. With a more extended organization and greater school fund to draw upon, the larger unit may engage in innovations and departures which may prove suggestive to the smaller. The publicity which radiates out of the larger centers of population is sufficiently fulsome to provide interesting school news to the surrounding territory. The press never fails to record the unusual and newsy, or troublesome side of things.

There are probably no two cities in the United States in which the approach to the school administrative task varies more strikingly than it does between New York and Chicago. One has a pupil constituency exceeding one million, the other considerably over one half that amount. Both school systems are equipped with able educational leadership and an army of trained instructors. Both enjoy a series of modern school-housing and utilitarian equipment.

But there is a difference in administrative tradition and policies. New York is circumspect, Chicago erratic. In the one city the slogan is "Hands off the schools," in the other the schools are drawn into political turmoil. One mayor appoints the members of the board of education upon standards of character and fitness; the other recognizes party interests and political preferment. In one city the alderman does not interfere with school interests; in the other the alderman deems it his prerogative to determine upon the board of education personnel, and to have a voice in school affairs.

In New York City the members of the boardof education are permitted to enjoy a long tenure
of service, in Chicago the come and go is frequent and sudden. In New York City the president of the board of education has been reappointed to office for the fifth time. During his
term of service the Chicago board of education
has experienced a dozen changes in leadership.
School-board presidents have come and gone in
quick succession.

The school administrative machinery of the castern city works smoothly and efficiently. There is a thoughtful and unostentatious attention to the great task in hand. There is no hurrah and no noise. In the midwest city the deliberations of the administrative body is given a spectacular setting. Things are done in a rush. Much language is employed, and the voice of protest is heard oftener than the word of praise. The air is tense with nervous excitement.

In tracing the causes, one must come to the conclusion that trouble lies with the temper of the public, rather than with the leaders in local government. The latter are the reflex of standards in public procedure. In choosing its leaders the one city is more discriminating than the other

In both cities capable citizens are chosen to administer the affairs of the school system. In the one city they encounter interference and are

not permitted to serve a sufficient tenure to carry out a continued policy, or to realize projects involving scope and the element of time. In the other, those chosen to sit in the school administrative councils are permitted to remain long enough to apply an accumulated experience to the task in hand, and left free to realize carefully planned and thoroughly digested projects.

The politicians of New York City have long realized that an unhampered board of education can render better service and bring greater prestige upon local government than one that is embarrassed by selfish interference. By keeping hands off the schools they strengthen rather than weaken the confidence of their constituency. Thus, while Chicago plays politics with the schools, New York does not. The public must be taught to see the difference.

### WHO PLAYS SCHOOL POLITICS—CITY OR COUNTRY?

The charge is frequently heard that in many of the cities throughout the United States the schools are dominated by politicians. The charge, we believe, may be refuted to the extent that such domination is confined to but few, rather than to many centers of population. Again, those who urge the indictment do not always discriminate between clean and unclean politics. Nor do they always recognize that the fact that a board of education is essentially a part of our political institutions.

The administration of the schools is a function of government, and in setting up the machinery for the same the assent of the public mind must be obtained. The members of a board of education must be chosen just as men are chosen to serve as mayor or members of a city council or village board. The popular voice is asked to make the choice. And what does all this mean? It means that the science of organization as a prerequisite to government comes into play—and that in the last analysis is politics, and nothing more.

In discriminating between good and bad politics we simply differentiate between those who pursue selfish interest and those who foster the public welfare. We set up political machinery to exploit men and measures, issues, and candidates to one common end, namely, the continuance and stability of government. And every plan of government must contemplate the education of the youth. It must be unselfish and realize the beneficient purpose for which it was originally designed.

Thus, there is a difference between politics and politics, and between the several motives that actuate men in the attainment of desired or desirable ends. Aside from a form of political activity which seeks the selfish interest of the individual is that activity which fosters partisan prestige and power, and loses sight of the public interest involved.

While the cities occasionally shock their constituency by doing the unethical in the field of school administration, the country district may resort to the startling thing. Here is an illustration. In Randolph county, Ind., the township school trustees were called upon to select a county superintendent of schools. Russell E. Warren was a candidate for reelection. He was opposed by Fred Rubey, principal of the Jackson, Ind., centralized school. The Union City Times in commenting on the contest, says:

"Mr. Warren is a Democrat and Mr. Rubey is a Republican and as Randolph county is Republican in politics 'to the victor should belong the spoils' and Mr. Rubey or for that matter any other Republican should be appointed to succeed Mr. Warren.

"The Times did not oppose Mr. Warren's appointment originally from a personal standpoint, but did from a political standpoint. We criticised the Republican county committee at that time for allowing Mr. Warren 'to walk right

into the meeting and walk out with the appointment,' because of lack of proper organization on the part of the Republicans."

The relative fitness of the candidates for the superintendency is not mentioned. The party label is urged as the determining factor. The interests of the schools do not at any stage enter into the picture. Party prestige overshadows the mental, moral, and physical welfare of the school child.

It remains to be said that the case is a singular one, and not indicative of a general state of things in which the school interests are submerged in party identity or party prestige. Such an attitude must be combatted whether it be found in city or country. The administration of a school system must rise above partisan interests as well as it must be free from the manipulation of the selfish politician. The selection of educational leaders cannot consistently be determined upon partisan lines. Such selection must be based upon character, scholarship, and executive fitness, and no other consideration.

### BOARD OF EDUCATION SERVICE AND PUBLIC GRATITUDE

The citizen who accepts a membership on a board of education with the expectation of gaining popular applause or an expression of public gratitude is certain to be disappointed. The American people are more inclined to be critical of their public servants and to see their shortcomings rather than acknowledge meritorious service. Public praise is only sparingly accorded.

Once in a great while we come across a newspaper item in which some observant and thoughtful editor says a good word for the board of education. Thus, we find an editorial in the current issue of the Norway, Mich., newspaper in which the following paragraphs appear:

"That hard-working, conscientious group known as the board of education should occasionally be brought to the attention of that large number of people who seldom think of them and of what they accomplish. Let them study cost systems until they are blue in the face, in order to shade the taxes, and they get passing attention; let them concentrate in other directions and a contented citizenry gives an approvingly lazy nod; but let them select a superintendent who does not measure up to the self-styled standards of any group, and there is Old Harry to pay.

"In the very near future they will select a man to carry on the excellent administration of Mr. Greenawalt. Upon their decision, and it is a mighty weighty one, rests the welfare of the children of the city. Members of the board are being canvassed many times a day with arguments for and against the selection of this and that man by those who imagine that they are judges of pedagogical and administrative ability.

"It takes a lumber scaler to judge another scaler, and a mining engineer to judge another engineer, and by the same rule, who is there among these busybodies who can completely judge an instructor's ability? An imagined wrong surely can warp a man's evaluative processes.

"The people have elected the school board who are simply servants of the taxpayers. They are doing the best they know how, but should they act contrary to popular sentiment, those who are disgruntled know the remedy, thanks to our democratic institutions.

The conscientious member of a board of education does not look for praise. He wants his work, however, judged with fairness and resents unwarranted criticism and fault finding. The small back-fence gossiper does not bother him very much, but feels aggrieved when a taxpayer of standing resorts to unjust attack.

The citizen who gives his time, thought, and effort to the local school system through service

in a board of education must not look for applause. If he performs his task fearlessly and wholly in the interest of the trust in hand he is bound to invite some criticism. That is unavoidable.

The only true compensation that can come to him must be found in the consciousness that through honorable public service he has made a contribution to the progress of his community, and thereby to his country.

### THE LOCATION OF SCHOOL ADMINISTRA-TION HEADQUARTERS

The school headquarters of the average community are usually located in some centrally located schoolhouse. Sometimes an old school building which has become obsolete, because commerce has invaded the residence district, houses the board of education and the executive offices.

Where the school system proposes a new building for its administrative offices the question of location comes directly under consideration. It may prove expedient to utilize a discarded school building for board-of-education offices, even though it be inconveniently located. But when the school officials are free to choose a site the question of convenience of access becomes a first consideration.

In the city of Detroit, Mich., the erection of a school administration building is in contemplation. The Detroit News discusses the subject of location as follows:

"If, as has been proposed, new headquarters are to be provided for the board of education, mature thought should be given to the needs of

that department and to the convenience of those having business with it. In any event, no reason can be given for housing these offices at the heart of the congested part of the city.

"In great part those who visit the offices of the board of education and the superintendency staff are teachers, the great majority of whom come from the residence districts. Both these and the administrative staffs whose business is with the schools use motor cars, and the problem of parking space near the headquarters building is thus of great importance.

"In addition, the great cost of centrally located property, the delays incident to congested traffic and the distance of the greater number of schools from downtown are decisive arguments against providing offices for the school authorities in the center of the business district.

This presents the problem as applied to one large city. It does not answer the question where two or three important residence sections are divided by a centrally located business district. We have seen school-board offices removed from crowded business districts to the quiet of a residence neighborhood. On the other hand we note that in a number of large cities the school administrative offices are located in the heart of the town, and are readily accessible from all sections of the same.

The arguments advanced by the Detroit newspaper are nevertheless worthy of consideration. The traffic congestion now found in every large community must be reckoned with, rendering the quieter and less traveled sections of the city more desirable for school administration headquarters.



TO THE LADIES!

Average Yield on 60 High-Grade Bonds

### Index of School-Bond Prices<sup>1</sup>

Harold F. Clark, Teachers College, Columbia University, New York, N. Y.

School-bond interest rates remained almost stationary for the second consecutive month. The rate in May was almost identical with the rate in April which was very close to the rate in March. The net interest rate of all school bonds sold in May was 4.76 per cent. The net interest rate on all school bonds sold in April was 4.75 per cent. As the figures show, the net interest rate in May was .01 of 1 per cent higher in May than in April. This makes the rate in May exactly the same as the rate in March which was the highest point reached by the index in recent months.

term issues, even at high interest rates, would seem to be the more sensible financial policy to pursue.

As is true almost every month, there were a few freak bond sales; one or two sales were actually made at a net basis of 4 per cent where some sinking fund or other public authority was buying the issue. At the other end of the scale, we have the largest number of issues selling at over 5 per cent of any month for a long time.

Total bond sales in the month of May were larger than in any previous month this year. The

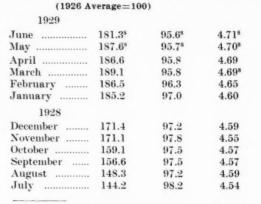


TABLE V

Security Prices and Yields'

Average Price of 60 Bonds

Average Price of 393 Stocks

Date

<sup>7</sup>As reported by Standard Statistics Company, Inc. Used by special permission.
<sup>8</sup>Not final.

Table IV shows a slight reduction in the yield of long term Federal Government bonds in April and a rise in trend since that time.

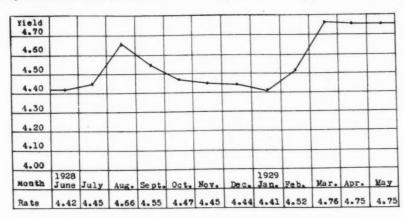


TABLE I. AVERAGE YIELD OF ALL SCHOOL BONDS SOLD DURING THE MONTH

As is evident from the figures, the market for school bonds has not improved; and what is worse, from the standpoint of the school board interested in issuing bonds no radical improvement is in immediate prospect. As has been said so many times before, the course of school-bond rates will be almost entirely dependent upon the amount of credit used in the stock market. It is quite true that the month of May showed a very decided contraction in broker's loans. But even after the reduction, the total amount of money advanced by the banks on stock exchange collateral was larger than at the high point of last December. Until there is further change in this situation, there is not likely to be any very great easing of bond-interest rates. The course of the bond market is shown very graphically by the plans of the Federal Treasury for its June financing. The official announcement says the Treasury is today offering for subscription at par and accrued interest through the Federal Reserve Banks an issue of nine months, 51/8 per cent Treasury certificates of indebtedness. . . .

### TABLE VI

### Revised Index Number of Wholesale Prices<sup>9</sup> Past Twolve Months Dont Sir Voore

Las	r I MEIAG	MICHUR		Lust Olx	1 ears	
Month 1929	All Com- modities	Building Materials	Year 1928	All Commodities	Building Materials 93.7	
June	96.110	$96.9^{10}$	1927	95.4	93.3	
May	96.210	97.510	1926	100.0	100.0	
April	96.8	97.9	1925	103.5	101.7	
Mar.	97.5	97.8	1924	98.1	102.3	
Feb.	96.7	97.5	1923	100.6	108.7	
Jan.	97.2	96.6				
1928						
Dec.	96.7	96.8				
Nov.	96.7	96.0				
Oct.	97.8	95.0				
Sept.	100.1	94.7				
Aug.	98.9	94.6	9U:	nited Sta	tes Burea	u
July	98.3	94.4	100.	abor Statis		

### TABLE II

### nts and Vields of Rond Issues

	Amounts and Yields of Bond	Issues'
		December, 1928
1.	School bonds sold during the month of May	\$ 25,024,000
2.	All municipal securities sold during the year (to date)	427,000,000
3.	All school bonds outstanding (estimated)	3,257,000,000
4.	Average yield of all school bonds outstanding (estimated)	4.63%
5.	Yield of school bonds of ten large cities	4.59%
6.	Yield of United States long- term bonds (quotation the	
	middle of January)	3.67%

<sup>2</sup>The monthly total of school bonds does not include all the bonds issued in the month, due to the difficulty of obtaining the yield on some of the issues.

This rate of 51/8 per cent is the highest rate paid on any Government securities marketed since 1921. This certainly shows that in the opinion of the Treasury, interest rates on public bonds are high and are likely to remain that way for some time. Under the circumstances, if a school board must have money for building purposes, short-

amount, something over \$25,000,000, compares very favorably with the largest months of recent years. As the bonds were sold in the month of May, it probably leads one to think that the period of obtaining the money has not been adjusted as carefully as possible to the dates on which it will be needed, as it is more than likely that the heaviest payments on buildings will not be made until some time later. School boards probably have a long distance to go in adjusting their financial balances more accurately to their actual needs. A lesson might well be taken from the banks of New York in this respect. Along

> TABLE III Bond Sales and Rates<sup>3</sup>

	Bond Sales			Average Rates	
Year	School	Municipal	All Public and Private	Year	Municipal
1928	\$240,000,0004	\$1,413,000,0004	\$ 8,000,000,000	1928	4.45
1927	266,000,000	1,509,000,000	7,735,000,000	1927	4.49
1926	260,000,000	1,365,000,000	6,311,000,000	1926	4.61
1925	323,000,000	1,399,000,000	6,223,000,000	1925	4.58
1924	288,000,000	1,398,000,000	5,593,000,000	1924	4.26
1923	206,000,000	1,063,000,000	4,303,000,000	1923	4.76
1922	237,000,000	1,101,000,000	4,313,000,000	1922	
1921	215,000,000	1,208,000,000	3,576,000,000	1921	
1920	130,000,000	683,000,000	3,634,000,000	1920	
1919	103,000,000	691,000,000	3,588,000,000	1919	
1918	41,000,000	296,000,000	14,368,000,000	1918	
1917	60,000,000	451,000,000	9,984,000,000	1917	
1916	70,000,000	457,000,000	5,032,000,000	1916	4.18
1915	81,000,000	498,000,000	5,275,000,000	1915	4.58
1914	42,000,000	320,000,000	2,400,000,000	1914	

<sup>3</sup>By special permission, based upon sales reported by the Commercial and Financial Chronicle. <sup>4</sup>Not final.

with the increase in school-bond sales for the month of May there was a decided increase in all municipal bonds.

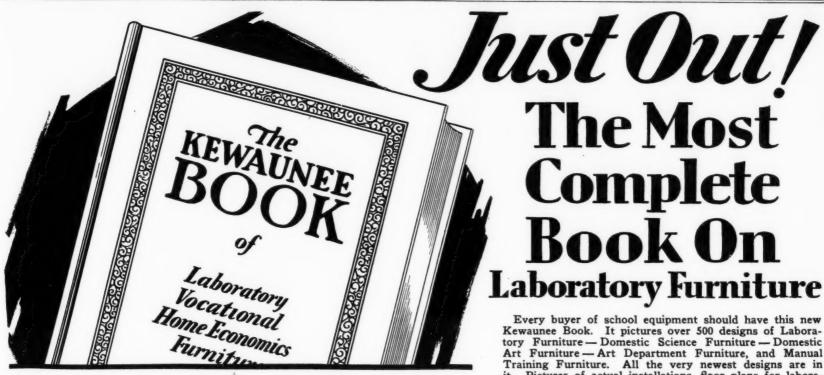
TABLE IV
Average Yield of Long-Term Federal Govern-

	ment	Bonds <sup>5</sup>	
Past Twelve	Months	Past Six	Years
Month		Year	Rate %
1929	Rate %	1928	3.437
June	3.776	1927	3.464
May	3.736	1926	3.544
April	3.67	1925	3.797
Mar	3.76	1924	4.010
Feb	3.66	1923	4.298
Jan		1922	
1928			
Dec	3.53		
Nov	3.48		
Oct	3.55		
Sept	3.54		
Aug.		<sup>5</sup> Taken from	Federal Re-
July		serve Bulletin.  Not final.	

Table V shows the trend of security prices and yields. The average price of 407 stocks in May was almost the same as the April average. There were, however, very sharp fluctuations within the month of May. The first week in May, stocks reached a new all-time high record, but a sharp break toward the end of the month carried the average back down almost to the April level. The break continued over into June and many stocks reached new low levels for the year. Preliminary indications are that the average for the entire month will show a decided drop. The average price of sixty bonds shows a continued tendency to fall. This, of course, necessarily means an in-

Table VI shows that a slight reduction in the price of all commodities took place from April to May and from May to June. The price of building material fell even more than the price of all commodities.

<sup>&</sup>lt;sup>1</sup>Copyright by Harold F. Clark.





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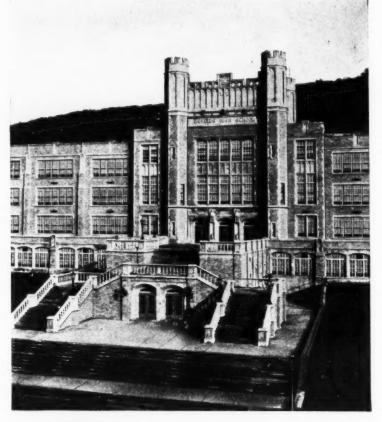
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# 5chool-Board

### MR. RYAN AND THE NEW YORK CITY SCHOOLS

In expressing approval of the reelection of Mr. George J. Ryan as president of the New York City board of education, the New York Evening World makes the following comment:

"In acknowledging his election for the eighth time as president of the board of education, George J. Ryan submitted interesting figures relative to the material progress of the New York schools during the period of his service. These figures are startling in their significance. The total registry in the schools increased 113,198, and this meant a heavy demand on the system materially. But during this period new accommodations were found for 182,456 children through a building program. Meanwhile the problem grows rather than diminishes. The demands on the schools in Manhattan are not so great, the demands in the other boroughs greater. A new school is built to meet the demands of a section, and parents move into the section that their children may have the advantage of the most modern buildings. Thus, the problem shifts and continues

"Perhaps the most interesting feature of Mr. Ryan's address deals with new methods of instruction that must result from the remarkable inventive genius of the age and the progress of science. He urges an intensive study of the educational possibilities of radio, television and aviation, and foresees the time, not far distant, when 'school children will see and hear some great modern scientist like Commander Byrd reporting his discoveries directly to them from the

uttermost parts of the earth.' This is certain to be. Not long ago all the school children of the city heard Chief Justice Taft administering the oath to President Hoover and heard the latter's inaugural address. Before the time of the radio not a thousand children in the schools would have known anything of the inaugural beyond the parade.

"Because of science and invention, the next eight years will likely see revolutionary changes in school curricula. The fact that Mr. Ryan is eager to utilize the new discoveries in educational work should mean that New York City will not lag behind in the march of progress.

BOARDS OF EDUCATION
—Akron, Ohio. The school board has been invited to cooperate with the municipal department vited to cooperate with the municipal department of heating and mechanical equipment, in establishing a school for building custodians, under the direction of Mr. R. C. Demary. The proposed school will offer a course in the care and maintenance of equipment, including steam boilers, proper methods of firing, and measures for reducing smoke. It is planned to start the school in June so that considerable ground may be covered before the heating season opens next October.

—The board of education of New York City has

—The board of education of New York City has approved a recommendation of the board of superapproved a recommendation of the board of super-intendents providing for the establishment of nine summer high schools, an increase of one, and seven summer junior high schools, the same number as last year. A new summer high school will be con-ducted this year in the building of the Monroe High School in the Bronx.

Both the junior and senior high schools will be conducted for a summer term of forty sessions, from July 2 to August 23, inclusive. The senior high schools will be in session daily for four hours, beginning at 9 a.m., and the junior high schools for three hours each.

—Because of the danger from motor vehicle traffic, the board of education of New York City has opened its playgrounds for the use of the children after school hours. The playgrounds connected with the schools designated in the approved list were made available to the children on May 1, to be used on Saturdays, holidays, and during the vacation period. On school days they will be open until 6 p.m. On Saturdays, holidays, and during the vacation period from 10 a.m. to 6 p.m.

Under the rules, only children under 14 years of age are eligible to use the playgrounds. Only outdoor playgrounds, accessible from the street may be used, and the use of school toilets is not allowed. Boys and girls are not permitted to use the same playground.

—Grand Rapids, Mich. After appropriating \$15,000 to the Kent Scientific Museum for educational services in the schools next year, the board of education has offered to maintain its own school nurse. ing service, at an additional cost of \$15,000 if the city commission fails to provide for it. In view of the fact that the school board has offered to assume the cost of school nursing service, the city commission was asked to provide for the medical service in all the schools, which it is legally impossible for the board to furnish.

—The board of education of Eau Claire is in a deadlock over the reelection of Superintendent Paul G. W. Keller. The issue was contested at the recent school election when five members were reelected to the board. The result of the election, however, did not change the status which means six votes over five against Keller. The contention made by the opposition is that Keller was reelected by a majority of one vote whereas it is held that a two-thirds vote is required. The pro-Keller members contend a two-thirds vote was not necessary as the motion to rehire did not carry as salary clause. The board's rules require a two-thirds vote for all expenditures, and the minority claim a motion to rehire involves an expenditure, as a superintendent will not work for nothing. The next step will be recourse to the courts. The board of education of Eau Claire is in a recourse to the courts.

—Milwaukee, Wis. The school board has rescinded its resolution of last February, creating the position of full-time assistant superintendent in charge of legal affairs. The local city attorney has assigned one of the assistant attorneys to the school board to handle its legal work.

(Continued on Page 76)

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## ... NO BUILDING IS MORE FIREPROOF THAN ITS DOORS AND TRIM . . . . DAHLSTROM



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(Continued from Page 74)

The supreme court in Minnesota has affirmed —The supreme court in Minnesota has affirmed a decision of the St. Louis county district court, in holding that school districts are governmental agencies, with limited powers, created solely to exercise public functions. The decision was given in the case of Frank Mokovich, of Virginia, a junior in the high school, who had brought suit against the school district for injuries suffered in a football game.

game.
—Topeka, Kans. The school board is contemplating the purchase of a radio ear, at a cost of \$2,300. The instrument is an amplifier and will be used in the special class for deaf children. It is believed the amplifier will aid the pupils in learning to appeals.

speak.

—Fitchburg, Mass. The school board is contemplating the adoption of a pension system for janitors of the city schools. The mayor has cautioned the school board against the adoption of the plan until a thorough study has been made of the situation. He calls attention to the fact that

of the situation. He calls attention to the fact that the city is at present suffering from too hasty action in the case of such laws.

Under the proposed pension plan, a janitor after 25 years of service and after reaching 60 years of age, will be retired on one half of his salary for the year preceding, but not exceeding \$500 a year.

—Rockland, Mass. The school board has voted to discontinue the no-school signal for stormy days. In the future, the parents of pupils will be the judges as to whether they shall or shall not attend school.

school.
—St. Paul, Minn. The local charter commission is considering a revision of the city charter. The school people of the city, as represented by the teachers' association and other organizations, are taking an interest in the problem and are making specific suggestions for the independent management of the school system. The local teachers' federation has particularly made request that the teachers be given a voice in the management of the school system.

—Portland, Oreg. The school board has adopted a recommendation of Supt. Charles A. Rice, providing for a solution of the problem of high-school loafing.

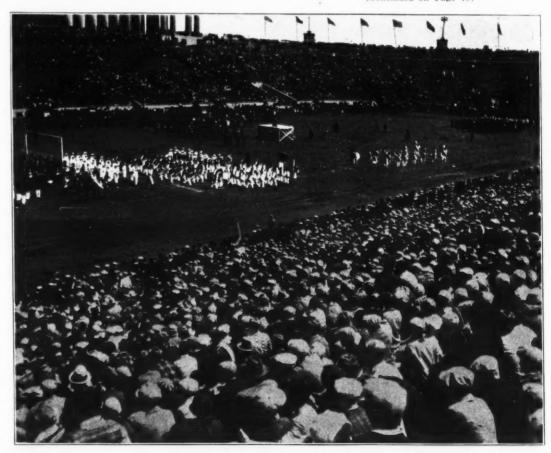
Under a new rule, students who fail to make passing grades in the high school in at least three subjects, during any term, will be placed on probation at the beginning of the following term. While in the probationary school, they will be allowed no

benefits or privileges, no athletics, and no organiza-tions. If the student fails to make passing grades in three subjects during the probationary period, he will be transferred to an ungraded high-school the next term.

While in the ungraded class, the student must pass in three subjects for one full term before being

returned to the regular school. The ungraded class will be housed in a nearby elementary school. It is believed the new plan may drive a few students out of the high school. Those who leave would be few, according to Supt. Rice, but it is better that they remain out of school, until they can return, pre-

(Continued on Page 78)



CELEBRATING BOYS' WEEK IN CHICAGO
Part of the crowd of 100,000 that filled Soldiers' Field, Chicago, May 24, to celebrate Schools and Citizenship Day
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SAN FRANCISCO CHICAGO MILWAUKEE TORONTO



—Cumberland, R. I. The school board has raised the cost of high-school tuition for nonresident pupils, from \$125 to \$150. The cost of grammar-school pupils has been raised from \$50 to \$60.

—The school board of Washington, Pa., has been restrained by Judge J. I. Brownson from erecting a high school and playgrounds on the Highlands Avenue site, if the cost of the buildings and equipment exceeds \$675,000. The action is based on the ment exceeds \$675,000. The action is based on the ground that the site is too expensive and will not permit the erection of a first-class high school, and further, that if the cost exceeds the bond issue it will involve an illegal expenditure, or will be illegal because of an increase in the indebtedness. The board had originally selected the North Main Street site, but later changed to the new site to acquire space for an athletic field for the school.

Street site, but later changed to the new site to acquire space for an athletic field for the school.

—Syracuse, N. Y. Dr. Harry P. Smith of Syracuse University, in his report of the school survey presented to the board of education, has recommended the elimination of standing committees of the board. He suggests that the board meet as a committee of the whole for the discussion of school policies, instead of referring these matters to the eleven standing committees. Dr. Smith points out that students of school administration are united in suggesting that standing committees be eliminated. From time to time, as the need arises, special committees may be appointed to be assigned specific tasks required by the board, and then cease to exist when these tasks are performed.

In the Syracuse board, the tendency has been in the direction of acting as a committee of the whole on important matters rather than delegating them to board committees. The eleven committees of the board are executive, finance, teachers, textbook, libraries, rules, buildings, elementary schools, high schools, extended use of buildings, Americanization, and insurance.

ization, and insurance.

—Indianapolis, Ind. The school board has decided against uniform dress for graduates of the elementary and high schools. Discussion among the board members as to the establishment of regulations of the graduating classes resulted in an board members as to the establishment of regula-tion dress for graduating classes resulted in an order that the board would not countenance man-datory dress regulations. One of the principals denied a report that she had threatened to withhold diplomas from girls who signified their intention of departing from the rules in the matter of gradu-ation dress.

Adrian, Mich. An attempt to restrain the -Adrian, Mich. An attempt to restain the school board from paying certain bills to concerns of which members of the board were stockholders, directors, or officers, failed when the court dis-missed the bill of complaint of the Adrian Realty Company.

### Coolidge Tablet Dedicated at Superior Central High School

High School

A bronze tablet commemorating the visit of former President Coolidge to Superior, Wis., was dedicated by the graduating class of 1929 of the Central High School on June 2. During the summer of 1928 the former president spent his vacation in Douglas county, Wisconsin, and the county seat, Superior, became his headquarters. During the period from June 15 to September 10, the Central High School became the capitol of the nation.

At the dedication exercises, Mr. Carl Ritzman read a letter from Coolidge and delivered the dedication speech. The tablet was unveiled by Dorothy Edelstein. It bears the following inscription:



"Calvin Coolidge, the 30th president of the United States, occupied this building as his executive offices from June 15, 1928 to September 10, 1928. "Erected by the class of 1929, of the Superior Central High School."

A tablet bearing a similar inscription was also placed in the library of the school.

ors, has filed suit in the Common Pleas Court against the school district of Wilkinsburg, Pa., to recover \$94,939 due on a contract. It is charged that the company was put to additional expense in the erection of the building because of mistakes and changes in the original plans and specifications.

-The J. G. Fullman Company, building contrac-

—Attorney W. C. Wehe, school director and former president of the school board, in a recent number of the Marquette Law Review, upholds the right of the Milwaukee school board to establish its own legal department. Mr. Wehe contends that the school board is an absolute and distinct body from the City of Milwaukee, and that it has the right to engage the services of an attorney to represent it at the legislature and to advise the board of the various bills introduced in the legislature. lature.

—South Kingstown, R. I. The school board has been threatened with a suit in the court because of its failure to comply with the orders of the town building inspector to remove fire hazards in two of the schools.

—Indianapolis, Ind. School employees who disregard the rules governing working hours have been threatened with dismissal. President Charles W. Kern of the school board has called attention to a state law giving the business director supervision over certain school employees.

It appears that a number of the employees were appointed by high-school principals with the superintendent's approval, or by the superintendent him-

intendent's approval, or by the superintendent himself, and they feel that they are only accountable to their immediate superiors, which has led to abuse in some of the school offices.

abuse in some of the school offices.

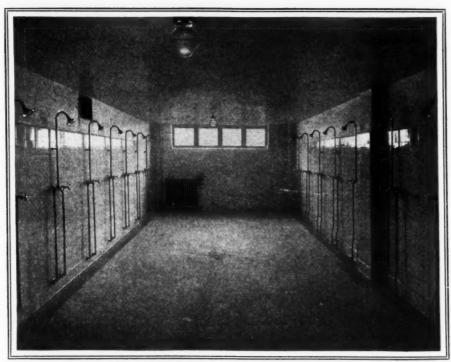
Although rules regulating hours of work had been established by the business director, it was found that principals were permitting clerks and stenographers to leave their work in June and return in September, with various other holidays in addition, and frequent absences during the year, without accounting to anyone other than the principal or the department head.

Oshkosh, Wis Beginning with July 1 all

—Oshkosh, Wis. Beginning with July 1, all health work in the schools will be directed and controlled by the city health department. In compliance with the existing laws, the school board has transferred the control from the committee on health to the health department. Similarly, all

(Concluded on Page 81)

150 Pounds Pressure L CRANE VALVES 2500 Pounds Pressure



A typical Crane shower installation in the Weber Gymnasium, Ogden, Utah. Architect for this building, Woods & Jensen. Plumbing and Heating Contractor, T. E. Thomas Plumbing and Heating Co.

# Showers are beneficial only when they are dependable

Under a steady stream of tempered water, muscles are washed free of exhaustion... taut nerves are gently slackened. Athletic directors realize this, and emphasize the

shower as an essential in conditioning teams. Doctors know it, and recommend showers as a certain method of soothing overwrought systems...of safe-guarding health...and of making cleanliness more inviting. But to fulfill these ends a shower installation must be free from annoying mechanical imperfections. It must diffuse the water evenly. It



must temper it with precise nicety. It must operate easily and control the strength of the flow.

Crane Co. makes such showers. Their dependability

is assured by the same care in manufacture that for 74 years has made the Crane Co. name synonymous with excellence in all piping materials, valves, fittings, and fixtures. It is only natural then that Crane shower installations should be found in a convincing number of school gymnasiums throughout the country.

# CRANE

GENERAL OFFICES: CRANE BUILDING, 836 S. MICHIGAN AVENUE, CHICAGO NEW YORK OFFICE: 23 W. 44th STREET

Branches and Sales Offices in One Hundred and Eighty Cities

# Ten Reasons for the Record-Breaking Popularity of the Six-Cylinder

CHEVROLET



In every section of the country, the new Chevrolet Six-Cylinder Trucks are sweeping ahead to one of the greatest records of success in the history of the commercial car industry—

—for these sensational new trucks meet, with unusual efficiency, the problems presented by crowded traffic conditions and modern ideas of prompt customer service.

They provide the remarkable flexibility, acceleration, speed and reserve power of the six-cylinder engine—with body types specifically designed for every business need. They afford outstanding economy of operation—and are actually available in the price range of the four!

Read, in the column at the right, the ten big reasons why truck users everywhere are turning to Chevrolet. Then get in touch with your Chevrolet dealer—and arrange for a trial load demonstration!

CHEVROLET MOTOR COMPANY, DETROIT, MICH.
Division of General Motors Corporation

The Sedan \$595 The Light De. \$400 The 1½ Ton \$545 The 1½ Ton \$650 Delivery ... 545 Chassis with Cab 650 All prices f. o. b. factory, Flint, Michigan

A SIX IN THE PRICE RANGE OF THE FOUR



- 1 Six-Cylinder Power—that carries full capacity loads up the steepest hills with abundant reserve power—plus the adaptability of a fourspeed transmission, with power take-off opening on the 1½ ton truck.
- 2 Six-Cylinder Speed and Acceleration—that permit the servicing of wider areas, and the completion of more trips—whether in city service or suburban usage.
- **3 Six-Cylinder Smoothness** that protects the entire truck from the destructive effects of undue vibration and affords exceptional comfort to the driver even on the longest trips.
- 4 Remarkable Handling Ease—that results from a full ball bearing steering mechanism; big, non-locking four-wheel brakes; and a remarkably smooth transmission.
- 5 Amazing Economy of Gasoline and Oil—due to such advanced engineering features as hotspot manifold, automatic acceleration pump and crankcase breathing system.
- 6 Outstanding Dependability—achieved by thoroughly tested construction in every unit—from the rugged rear axle to the large-capacity, highly efficient Harrison radiator.
- 7 Extremely Economical Service—provided by 10,000 Authorized Chevrolet Service Stations, operating under a low flat-rate system of charges.
- **8 Ample Capacity** made possible by a heavy channel steel frame, with sufficient frame length to permit the mounting of unusually large bodies without extensions.
- 9 Wide Selection of Body Types—that make Chevrolet Trucks adaptable to every line of business. And among them is one designed especially for your requirements.
- that make Chevrolet Trucks the biggest values ever offered—combined with the lowest available financing charges for those who desire to buy on easy terms.



LUMSY fingers—wandering minds—everyday little accidents—now comes an invention which enables us to say "What of it;" an invention which forces us to revise all our old ideas about floors.

In the past, comfortable and quiet floors were hard to clean. Vice versa, easy-to-clean floors were noisy, cold and fatiguing to walk on.

Then came linoleum—a sound and shock-absorbing floor—a really restful floor. And *relatively* easy to clean.

For years, the manufacturers have been working and experimenting to turn that *relatively* into *absolutely*. In 1927, after many failures, and partial successes, came the *Sealex Process*.

Floors of Sealex Linoleums and Sealex Treadlite Tiles are practically as easy to clean as glazed tile. Every microscopic pore in the material has been penetrated and sealed. Dirt cannot be ground in. Spilled liquids, even ink and ammonia, won't soak in or leave disfiguring marks. A light mopping renders the floor immaculately clean.

This Sealex Process comes opportunely—at a time when we are just beginning to recognize the full decorative possibilities of linoleum and other cork-composition materials. Sheets may be cut into separate tiles, long strips for bordering, circles, stars—any shape imaginable. The children's playroom or kindergarten room and the bordered tile pattern (both illustrated on the next page) are examples of what the Bonded Floors designing staff has done and can do.

Bonded Floors have been used to advantage in schools—old and new—all over the country. Entrance hall, corridor, office, classroom, library, gymnasium—there's a Bonded Floor perfectly

(Continued on next page)



order, will aid in game formations as well as give quietness and durability.

# HEER and COLOR in the children's rooms

(Continued from preceding page)

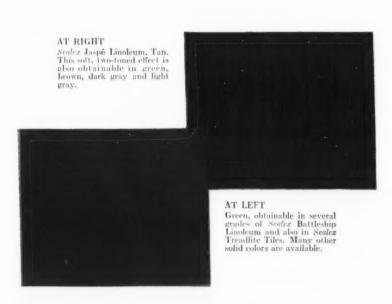
suited to every space, a floor at once practical and attractive in appearance.

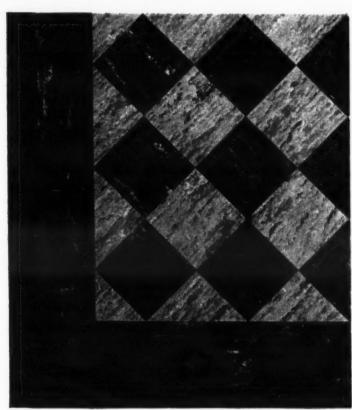
Designing floors is only one side of the complete Bonded Floors service. We will give you expert assistance on every phase of your school-floors problem—will put you in touch with an experienced, dependable distributor of Bonded Floors who knows how to install Sealex Linoleums and Sealex Treadlite Tiles correctly. We have specially selected and trained our authorized distributors with the sole idea of delivering satisfactory floors. That we have faith in their workmanship, and in Sealex materials, is evidenced by our Guaranty Bond against repair expense.

We are at your service for any information you may require in connection with resilient floors-no obligation, of course.

### BONDED FLOORS COMPANY INC. Division of Congoleum-Nairn Inc.

General Office: Kearny, N. J. Authorized distributors in principal cities





# BONDED

Resilient Floors Backed by a Guaranty Bond

"Facts You Should Know about Resilient Floors in Schools." A booklet prepared by qualified architects. May we send you a copy?

## California Students



High School, Lodi, California

In California - where practically all of the modern high schools are equipped with swimming poolschlorination has the highest endorsement by school boards and health officials. In school pools subject to heavy bathing loads it is imperative that the steriliz-

ing agent have positive continuous disinfecting action in the pool water itself.

Chlorination has an active residual sterilizing effect in the pool water, the intensity of which can be readily adjusted by using W & T chlorinating equipment to meet any bathing load.

### TIERNAN CO., Inc. WALLACE 🝮



Manufacturers of Chlorine Control Apparatus **NEWARK** 

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DALLAS OGDEN CHICAGO SEATTLE DETROIT PHILADELPHIA KNOXVILLE WALLACE & TIERNAN, LTD., TORONTO, CANADA

WALLACE & TIERNAN, LTD., LONDON, ENGLAND

C NAMES CONTROL WARDS CONTROL CONTROL

(Concluded from Page 78) funds in the educational department devoted to health work will be transferred to the municipal fund. The transfer of the control of school health work means that the health department will have charge of the selection of school physicians and nurse

-Elyria, Ohio. The board of education of Ober-

—Elyria, Ohio. The board of education of Oberlin village union school district has brought suit against the board of Pittsfield township, claiming \$166 in tuition. The tuition charges were for fifteen students, residents of Pittsfield, who attended the high school in the Oberlin district.

—High-school girls at Glendale, Calif., recently presented a petition to the school board, protesting against the compulsory uniform dress rule. The girls objected to a uniform of middies and blouses, on the ground that it is too hot for a southern California climate. They suggested a uniform gingham dress.

California climate. They suggested a uniform gingham dress.

—Milwaukee, Wis. The school board has adopted a revised salary schedule for assistant superintendents. Under the schedule, assistant superintendents will start at a minimum of \$5,000 per year, and will advance by annual increments of \$250 up to \$5,500 in the third year. After the maximum is reached, the superintendents will be eligible to a supermaximum with two steps to \$5,750 and \$6,000, subject to the recommendation of the superintendent and the approval of the board.

—Boston, Mass. The charges of Chairman Francis Slattery of the schoolhouse commission that hundreds of thousands of dollars have been lost to the city by the refusal of the school committee to provide a proper warehouse for supplies, have been branded as false by the members of the committee. At a conference of the school board, responsibility for the loss through theft and leakage was placed on the shoulders of the commission which, it was pointed out, could have leased any building on its own responsibility through an emergency action.

The matter came to a head when the school board refused to sanction an appropriation of \$135,000 for the purchase of a building for storage purposes. It had been the purpose to have the schoolhouse commission and the school board use jointly the new storehouse purchased last January for storage purposes.

—Lansing, Mich. The school board has recently

-Lansing, Mich. The school board has recently changed from the six-year to the four-year plan of

electing school-board members. Under the new plan, one member will be elected to serve for two years, and two for three years each. After 1933, all members will be elected for terms of four years each.

-Craig, Colo. The school board has raised the ion for high-school students from \$6 to \$13 tuition per month.

—Detroit, Mich. The chairman of the state labor commission, Mr. E. J. Brock, has threatened to close some of the school buildings as a result of hazardous conditions which he states he has discovered. In the Eastern High School he directed that the board erect fire escapes, that waste paper be removed from the basement, and that the shoot-ing range be discontinued. The school board has

already directed that the waste paper be removed and has discontinued the rifle range.

—Wichita, Kans. The school board has been asked to pay a bill of \$300 incurred as a result of mild punishment administered to a pupil in one the schools.

of the schools.

Raymond Mitchell, a pupil, was punished by his teacher for an infraction of the rules. The boy was ordered to sit on a planing machine, and a mischievous schoolmate started the machine in motion, which caused such injuries that the boy was forced to remain in a hospital for some time. The bill is for hospital expenses and the price of a new suit of clothes.

—Eyeleth, Minn.—An election has been called to

-Eveleth, Minn. An election has been called to

—Eveleth, Minn. An election has been called to determine whether the local school board may purchase the hippodrome building, a recreational building, at a cost of \$50,000. For the past few years the building has served as a recreational center under the supervision of the school board.

—Grand Rapids, Mich. The members of the former city school nursing staff, who have been released because of a lack of funds, have made a request for their last pay checks. It appears the city health department refused to bear the financial burden and asked that the school system take over the work. The board members refused to allow the the work. The board members refused to allow the city department to employ school nurses to be paid out of the \$15,000 fund appropriated for nursing work after July 1. It is anticipated the school

board will organize its own school nursing service in the fall.

in the fall.

—The school board of Seattle, Wash., has adopted a resolution providing for a survey of the school playgrounds. The purpose of the survey is to inaugurate a plan of supervision of these fields after school hours, on Saturdays, and during the summer vacation. Mr. A. E. Griffiths, a new member of the school board, has been associated with the playground movement for a number of years and has supported the plans for the survey.

—The Lincoln School Window Glass Casualty Company, organized by school children of Sheboygan, Wis., to insure against breakage of windows during ball games on the school playground, believes it operates with the smallest working capital of any company in the world. One hundred and thirty-three policies have been sold by its agents at ten cents each, yielding a capital fund

agents at ten cents each, yielding a capital fund of \$13.50. When a window is broken, one of the company authorities reports the matter to the school officials and a settlement is immediately

effected.

—Detroit, Mich. The school board has intimated that it will use \$1,140,000 of the \$6,000,000 which the city will raise for the 1929-30 school-building program, for a part of the purchase price of the Real Estate Exchange Building. The building which is twenty stories high, is to be used as an administration building for the school system. The purchase price is \$1,750,000.

—Baltimore, Md. The school board has adopted a new rule making the completion of the sixth grade the end of the elementary-school period for grammar-school pupils. The rule was adopted in anticipation of the new child-labor law, which became effective June 1.

—Mr. B. L. Greenfield of Viroqua, Wis., has been elected superintendent of schools at Glenwood, to succeed O. L. Krasselt.

—Mr. Arthur Verner of Peoria, Ill., has been elected superintendent of schools at Clinton, to succeed T. H. Pease.

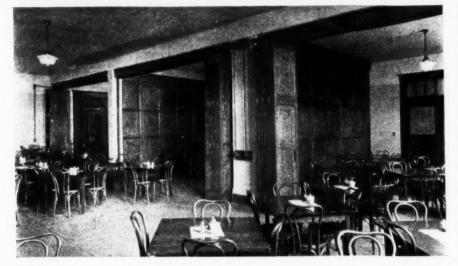
—Mr. John Moss has been elected superintendent of schools at Paris, Ill.

—Mr. W. E. Thorsberg of Crystal Falls, Mich., has been elected superintendent of schools to succeed L. P. Holliday.

# Circle A Folding Partitions

(Sound Insulated)

have a positive Roller Chain Drive



CIRCLE A Folding Partitions are a complete improvement over any folding partitions on the market. Mechanically operated by roller chains—not ropes or cable—hence the drive is positive. Patented hanging method insures easy operation. A special sealing system at floor, walls and ceiling effectively stops noise, odors and light. Doors are thoroughly insulated against sound. There are no dirt-harboring tracks with Circle A Folding Partitions.

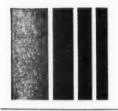
All workmanship and materials are in keeping with highest type of cabinet work. Furnished in type of construction suitable for any school, hall or other requirement. Send for details.

Ask also for information on Circle A Rolling Partitions.



600 South 25th Street, Newcastle, Ind.







### THE INCIDENCE OF HEART DISEASE AMONG SCHOOL CHILDREN

In the United States, during the year 1924, more deaths between the ages of 10 and 14 were due to heart disease than to any other cause. The prevalence of cardiac disease has been steadily increasing, so that it is now the principal cause of death.

Dr. Jacob M. Cahan of Philadelphia, Pa., in an article on "The Incidence of Heart Disease in School Children," in the Journal of the American Medical Association for May 11, presents a report based on an examination of pupils in ten public schools of Philadelphia. The survey was undertaken for the purpose of investigating the incidence, the morbidity, and the prophylaxis of organic heart disease in the children of these schools.

The study showed that the percentage of heart disease was dependent on the age and sex of the children. The age of children in the elementary schools is from 6 to 14 years, while high-school children range from 12 to 18 years. It was found that the older the children, the greater was the incidence of the heart disease. Thus, while the percentage of heart disease in the elementary schools was 0.69, that in the high school was 1.11. The average percentage of heart disease in the children of all ages was 0.91.

With regard to sex, Dr. Cahan found that there was a difference in the proportion of cases of heart disease among boys and girls. Of the 76 cases in the elementary and high schools, where 4,198 boys and 4,314 girls were examined, 33 were in boys as against 43 in girls. In other words, the

percentage of heart disease in the boys was 0.78, and in the girls, 1.

In the study it was found that practically all the children were of the Caucasian race, which

colored enildren because the ratio of mortalicy is greater in the colored race.

In the diagnosis, all children were divided into definite groups. To Class 1 belong patients with organic heart disease able to carry on ordinary physical activity without discomfort. To Class 2 belong patients with organic heart disease unable to carry on ordinary physical activity without discomfort. These cases are divided again into (a) patients whose activity is slightly limited, and (b) those whose activity is greatly limited. With one exception, the functional capacity of these children fell into Classes 1 and 2. Judging by the history, thirty pupils belonged to Class 1. Of the 63 children unable to carry on ordinary physical activity without discomfort, 41 belonged to Class 2a and 22 to Class 2b. Class 1 children indulged in all physical exercises and Class 2a children were restricted in gymnastics, while those in Class 2b were prohibited from indulging in any exercise. Only one pupil belonged to Class 3. He could not be subjected to the slightest exertion, was carried to his desk, and was even prevented from speaking in class.

In a complete estimation of the prevalence of heart disease in the children of these schools, three other factors need be considered; namely, the chronic absentee, the child attending a special school, and the child whose heart disease remains undiscovered. Next the study should give consideration to children with crippled hearts who attend special classes, regardless of the pupils' residential district. A child who is unable

to attend the regular school may be enrolled in an orthopedic class or in a nutrition class. Such placement is usually made on the advice of the family physician.

The third and last factor bearing on the incidence of heart disease in the children of these schools is the neglected case. The average school physician, without some privileges for examination, naturally does not find any large percentage of organic heart disease. He is greatly handicapped in the examination of the heart because the child does not bare the chest. Again, it is found that the average child of school age does not have a periodic health examination, annually or even at greater intervals. It is believed that the pupil is frequently neglected medically, except for the examination made in school, until something seems wrong with him. Irremedial defects, or conditions receiving treatment at the time of the examinations are noted on the medical record, but, of course, are not recommended for treatment. Neither the school physician nor the nurse ever treats any condition, except for the administration of first aid. Should it become known that a child is developing a heart disease, any focus of infection must be eradicated without delay. In this way, a progressive menace to health may be checked sooner and the morbidity diminished.

Regarding the morbidity of heart disease, it was shown that the disease formed a handicap in the educational life of almost 1 per cent of these school children. Of the 260 children excused from gymnastic exercises for all reasons, 94, or more than one third, were excused because of heart disease. Of these, 35 were excused from all exercises, and 59 were restricted.

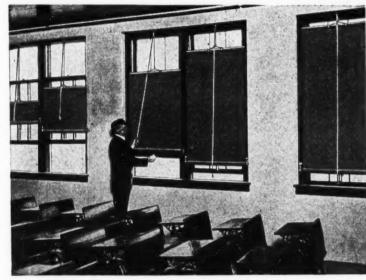
Summarizing the conclusions of Dr. Cahan, it was noted that there was a general incidence of 0.91 per cent of organic heart disease among 10,333 children examined. The younger children

(Concluded on Page 84)

# Light and Air

## The Right of Every Child

No need to argue the value and necessity of Light and Air in the development of the growing child — no need to argue their effect upon learning ability as well as health. There is very real need, however, to guard against the denial of these two rights of childhood — very real need to guard against providing one at the expense of the other.



### Check These Six Important Features

- **1** Adjustable. May be had in the adjustable style which permits their being rolled up from bottom at the same time they are lowered from top. This distinctive feature makes possible regulating sunlight and ventilation through either top or bottom of window.
- 2. Sanitary. Method of control does away with any soiling by hands. No folds or bunches to lie upon window sill or brush against floor. The shades may be easily cleaned by vacuum cleaner, dry cleaning or washing.
- 3. Durable. Made of best quality materials throughout. All colors are sun-fast dyes. Experience has shown conclusively that they outlast by far the ordinary filled window shade.
- 4. Translucent. Through Draper Shades the sunlight comes softly modified and is correctly diffused to all parts of the room.
- 5 Attractive. Years of development have resulted in the most tasteful and distinctive of designs. Expert workmanship assures a dignified and handsome quality that adds to the appearance of the building inside and out.
- 6. Practical. May be easily cleaned and quickly adjusted to meet all conditions. DRATEX Shade Cloth is of a selected grade of material, woven to our special specifications—strong, pliable and long-wearing.

# Draper Adjustable Window Shades

are designed — not to shut out light, but to permit the **absolute maximum** of light to enter the schoolroom and still guard against the only thing which can cause eyestrain — glare. They are designed to do this **without** sacrificing ventilation — an extremely important feature.

Soft luminous top light is the most valuable light to come through a window. It is this light which the Draper Adjustable Window Shade allows you to enjoy, at the same time gently diffusing, but not cutting off, the light from the sun's direct rays which, falling lower upon the window, ordinarily cause glare.

Draper shades are an absolute aid to proper natural ventilation. By lowering windows from the top, free overhead circulation of air, without draft, is permitted. There is no obstruction to ventilation and there can never be the annoyance of a flapping shade.

Luther O. Draper Shade Co. Spiceland, Indiana

Draper Adjustable Window Shades



Meet Every School Requirement



## LANDIS

## **ELECTRIC TIME** AND PROGRAM CLOCK **SYSTEMS**

An Automatic System that takes care of the various changes of schedule for the different days of the week -

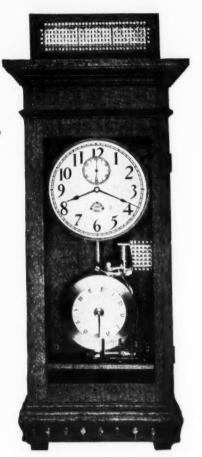
The Landis System provides a line that represents simplicity in construction, accurate mechanical and electrical design, and a system that is long lived and economical in operation.

Allow us to submit specifications covering the individual requirements of each specific installation. Our detailed layout makes it possible to have your equipment installed in a first

Send us an outline and we will gladly send you a figure on your proposed installation.

### Landis Engineering & Mfg., Co.

Waynesboro, Pennsylvania



(Concluded from Page 82) had a slightly lower incidence of heart disease than the older pupils, and the boys were similarly favored over the girls.

Valvular disease, mitral stenosis, was the most frequent lesion found. The anatomic diagnosis was made in 53 of the 94 children with heart disease. Fourteen of these 53 showed signs of mitral stenosis and mitral insufficiency.

Baring of the pupil's chest might introduce the atmosphere of a physician's private office or that of a hospital into the school clinic. The school physician could then make a more comprehensive examination, improve the diagnostic service in general, and would thus overlook fewer actual heart conditions.

THE RELATION OF RESPIRATORY ILLNESS
TO VENTILATION

A report covering the relation of respiratory illness to type of school ventilation has recently been made by Surgeon General H. S. Cumming of the U.

S. Public Health Services In the study, a comparison ness to type of school ventilation has recently been made by Surgeon General H. S. Cumming of the U. S. Public Health Service. In the study, a comparison is drawn between two groups of schools, one group ventilated by mechanical means, and the other by the natural open-window group. The groups were nearly equal in size, the mechanical group having 1,573 pupils, and the window-ventilated group 1,546 pupils. The two groups were nearly comparable in composition, the first having 17.5 per cent of pupils of American parentage, and the second 15.0 per cent of such pupils.

In the study, the weighted mean temperature of the rooms of the schools throughout the course of study was found to be nearly equal for both groups, with 67.8 deg. F. for the mechanically ventilated group, and 68.1 deg. for the naturally ventilated group.

The total respiratory illness absenteeism findings revealed a rate of 3.0 per cent for absences in the mechanically ventilated group, and 1.8 for the naturally ventilated group. The study showed a respiratory illness rate of 3.3 per cent in the mechanically ventilated group of schools, as compared with 1.2 per cent for the naturally ventilated group.

In the matter of respiratory illness, absences of

group.

In the matter of respiratory illness, absences of three days or more in the mechanically ventilated group of schools was found to be in excess of that

in the naturally ventilated group in all cases, and the same held true for respiratory illness absenteeism for a duration of one-half day or more, with only one exception. The actual number of absences of three days or more amounted to 359 in the mechanically ventilated group, as compared with 133 in the window-ventilated group.

The study confirms the findings of the New

The study confirms the findings of the New York State Commission on Ventilation, except insofar as these studies bear on the importance of slight degrees of overheating. Similarly, the study confirms those of the New York Commission on Ventilation made in Syracuse, N. Y., in 1927.

### HYGIENE AND SANITATION

—Contrary to conditions found to exist throughout the country, the evesight of New York City school children does not become increasingly weaker as they progress through school. A recent report of the Eyesight Conservation Council shows that children with defective vision in the higher grades of elementary schools in New York are fewer instead of being more numerous. Tests made in other cities revealed that the proportion of pupils with defective eyesight is greater in the higher grades than in the lower ones

School officials have attributed the condition to the effective sight-conservation work in the New York public schools. Children with poor eyesight are removed from classes and are given better conditions under which to study, and it is believed that the work was reflected in the recent test.

Tests made upon school children of different grades has shown not only that the number of near-sighted pupils increases from class to class, but that the average amount of near-sightedness also increases. It has also been stated that the number of near-sighted pupils increases as the demands upon the eyes of the pupils increase.

Pie, tea, coffee, and hot dogs are now banned —Pie, tea, coffee, and hot dogs are now banned in the grade lunchrooms controlled by the board of education of New York City. Cocoa and milk replace the forbidden beverages. Solid chocolate or hard candies are available for sweet stuff. Stewed or fresh fruits must be on sale daily in amount equal to half the total quantity of dessert available. The idea, of course, is to have an abundant supply of wholesome foods on hand so that youngsters can select the right sort of lunch easily and at low cost select the right sort of lunch easily and at low cost.

-The board of education of New York City has opened 430 playgrounds during the vacation months. —Miss Dorothy Smith has been appointed school nurse at Valparaiso, Ind.

### ILLNESS AND DEATH TAKE HEAVY TOLL OF SCHOOL CHILDREN

Illness and deaths among children of school age in the United States have reached such proportions that the Federal Bureau of Education has issued an

that the Federal Bureau of Education has issued an appeal to school authorities throughout the country to campaign to make common illness less common, to have remedial health defects corrected, and to conduct drives to reduce accidents to children.

In a recent report on "Mortality and Morbidity of Children of School Age, prepared by Dr. James F. Rogers, chief of the division of physical education and school hygiene of the bureau of education, Dr. Rogers directs attention to the fact that the latest statistics, those for 1925, show that there is a death of a child of school age every ten minutes, and that sickness causes a serious loss in school attendance.

The amount of absence on account of illness, the report says, "could be reduced 25 per cent, with a saving of two days per child or a total of 250,000 school years, and a financial gain of \$25,000,000. Such a reduction in sickness also means the saving of many lives.

of many lives.

Dr. Rogers points out that many of the causes of death are preventable and adds that granting that the ten diseases named first were eliminated, and that mortality from tuberculosis were cut in half, there would be a saving of 5,000 lives or \$100,-

half, there would be a saving of 5,000 lives or \$100,000,000 per year.

With better ventilation in schools, with better care as to the clothing of children, and with adequate isolation of children with respiratory disorder, many ailments could be materially reduced. By vaccination and by teachers' examinations, and the exclusion of suspects, the common communicable diseases would become less common, according to Dr. Rogers. With good hygions for which ing to Dr. Rogers. With good hygiene, for which the school is more or less responsible, there is hardly an excuse for digestive disorders and real headache, while with adequate dental and medical supervision, toothache, and eye trouble should al-

most disappear.

With such prevention sickness from miscellaneous causes would diminish. On the whole the amount of sickness could be reduced by 25 per cent, with a saving of two days per child, or a total of 250,000 school years and a financial gain of \$25,000 and a second results.

# TILE—THAT HUSHES FOOTSTEPS AND DEFEATS WEAR



DOWN the corridors they go—hundreds of pounding feet a day. Do they make a noisy clackety clatter or merely a muted pitter patter? Wherever Duraflex Tile is used, it's always the latter. For this tile is resilient—quiet underfoot—restful, a joy to walk on.

Yet unlike ordinary resilient tiling, Duraflex tile withstands the effects of countless pounding feet and is impervious to acids, alkalies, fire or water. It will last for years because

of the time-tested Duraflex formula of resilient and wear-resistant materials.

Duraflex Tile is a mastic tile made of the same ingredients as Duraflex-A—the permanent, resilient, ductile flooring material that has met the approval of architects, builders and property owners for many years. The principal differences are that the composition has been allowed to set beforehand for cutting into individual tiles; there-



A Duraflex Tile Installation in the International Magazine Building, 959 Eighth Avenue, New York City. Huberth & Huberth, Agents, 2 Columbus Circle, New York City.



fore, the floors can be used immediately after laying; and decorative patterns are obtained by contrasting colors.

Duraflex Tile is available in soft shades of red, tan, brown, green, blue, gray and black. All colors are absolutely fade-proof and wear-proof because the pigment is in the tile, not merely on the surface. It is easy to keep clean and sanitary because its smooth surface does not absorb foreign matter. Its initial cost is surprisingly

moderate and maintenance costs are negligible.

For modern floors in hospitals, schools, office buildings, apartment buildings, churches, institutions, etc., Duraflex Tile is ideal. Let us send you our Color Chart of different designs, with other detailed information. If a solid, seamless, one-piece floor surface is preferable for your need, ask also for data on Duraflex-A. The Duraflex Company, Inc., Baltimore, Md. Offices in principal cities.



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### New York's School-Board Convention Activities

A Regional Meeting Plan Explained by President William S. Jewett

The members of boards of education of New York state have for some years maintained a state association of school boards. The transient character of school-board service has, to some extent, interfered with the continuity of leadership and the stability of association membership.

The fact, however, that new board members appear upon the scene from time to time has rendered association effort all the more desirable and necessary. Then, too, it has been found that there are members of boards of education, usually business and professional men, who do not always find it convenient to make long trips in attendance at state conventions. Hence, the regional convention which brings the meetings nearer to those who would like to attend them.

Thus, the Associated School Boards and Trustees of the State of New York conducted this year a series of regional meetings. These were held this year in March, April, and May and in cities as follows:

Garden City, White Plains, Syracuse, Rochester, Ithaca, Buffalo, Schenectady, Glens Falls, Bingham-Jamestown, and Newburgh.

The results were most gratifying and met with hearty approval. One of the regional meetings had an attendance nearly as large as the usual annual state meeting.

Discussing Timely Topics
President Raymond S. Jewett, of the association, who is a member of the Mount Vernon board of education, in discussing these regional meetings, says:

"The most outstanding fact about these regional meetings is the great enthusiasm and interest shown in the discussion of school-board problems in the open forums. In two or three of the meetings the delegates assembled chose to continue the discussion of school-board problems in preference to visitation of buildings as indicated on the programs. Another fact that indicates that the school-board members consider the benefits derived by the individual pupil of primary importance, is shown by the extended discussion at each meeting of the following topics:

1. "How to Secure Better Trained Teachers."
2. "Professional Growth of Teachers."
3. "How to Eliminate Unsatisfactory Teachers."
4. "How to Take Care of the Pupil with Retarded Mental Development."

5. With the Present Surplus of Teachers Should School Boards Hire Married Women?"
6. "Salary Schedule."

The topics next in importance as indicated by the interest, enthusiasm, and amount of discussion are as follows:

1. "The Value of a School Survey."
2. "School-Building Standards and Costs."
3. "How Far Should the School Boards go in Spending Money for Remedial Health Work?"

Since the conclusions reached were not the same at the different meetings it is evident that the same policy should not prevail for all districts. There seemed to be an agreement upon one proposition that the best trained teacher should be hired and paid a livable salary.

An examination of the several regional pro-

grams discloses the fact that subjects and speakers had been chosen with discriminating care. The mention here of some additional topics may prove suggestive:

Fiscal Independence of School Systems, Raymond S. Jewett, Mount Vernon.
School Building Cost, Superintendent Robert K.

Toaz, Huntington.
Vocational Guidance, Dr. William H. Holmes,
Superintendent, Mount Vernon.
Taxation and Finance of the Public Schools, Dr.

Taxation and Finance of the Public Schools, Dr. Frank D. Boyton, Superintendent, Ithaca.

The Functions of the Associated School Boards and Trustees of the State of New York from the Standpoint of a Superintendent of Schools.

How to Keep School-Building Construction Ahead of the Growing Population, Mr. A. J. Stoddard, Supt. of Schenectady Schools.

School Building Standards and Costs, Dr. James T. Ivory, Member, Binghamton Board of Education.

Reasons for Regional School-Board Conventions President Jewett in a report sets forth the purpose of the regional meetings as follows:

"To increase the value of the organization to its present members by an added opportunity for discussion of board problems by a larger representation of the individual board members, and second, to increase the number of boards represented in our association. Most boards send but one, or possibly two, delegates to our annual meetings. The importance of our work and the continual change in personnel of the boards certainly make it most desirable to hold an additional meeting during the year at a place easily accessible to all board members, at which they may receive information about board problems and take part in their discussion. Added members give added strength and value. Every board in the state should be a member of our organization, and it is our aim to have each board represented in our association." He then discusses their value in the following order:

"1. It is of great education value to board members. As I have already stated the personnel of boards is constantly changing. I think all of us will admit that our value to our school systems during the first two or three years of our terms was very slight, not through any lack of interest or desire, but rather through ignorance. Listening to discussions of our problems by those qualified by training and experience, will be of great value to us individually and to our school systems.

"2. It is a medium through which the various boards may make their wishes known in reference to legislation affecting them. As individual boards, we have little or no influence at Albany. As an active organization speaking officially for all or most of the boards of the state, we can gain recognition. This has been shown during the recent session of the legislature.

"3. In case of necessity it is a protective agency against infringement of our interests by any other group. The teachers, superintendents, and mayors have their organizations and it is important that our boards of education should have an organization ready to protect their interests.

"4. It is a medium for the exchange of ideas and information. In modern business, cut-throat price competition is rapidly disappearing and is being replaced by quality competition. Trade associations are the accepted order of the day. Our school systems should profit by this example and maintain a similar organization in order that all may benefit by the ideas or practices which have been found to be of value in any community. In addition to our meetings for discussion of such subjects, our executive secretary will broadcast to all boards any items of this nature which may be sent to him. It is hoped

\*\*\*\*\*\*\*\*\*\*\*\* A LACK OF LEADERSHIP

All the learned professions are seeking men of the first rank to fill the positions that call for men of vision, ability, originality and the highest standards in scholarship. There are plenty of second-rate men, but when are the men of outstanding promise to become leaders in the intellectual and scholarly life of the coming generation?

We need more men of first rank who will see to it that the perspectives are not lost and the fundamental principles are not forgotten. I do not think that the present-day methods of study in our graduate schools are well fitted to train for leadership. . . . Our graduate schools are allowing themselves to follow rather than lead, and hence we get no adequate training for scholarship.

Dr. Charles M. Andrews, Yale University.



C. M. HIRST
Little Rock, Ark.
Mr. Claude M. Hirst, who was recently appointed director of a commission on schoolhouse planning and construction for ten southern states, has been for some time director of school buildings and grounds for the state education de-

of school buildings and grounds for the state education department of Arkansas.

As director of the inter-state school-building service, Mr. Hirst will be in charge of the school-building work in Alabama, Arkansas, Florida, Georgia, Mississippi, North Carolina, Oklahoma, Tennessee, Texas, and Virginia. As director of this work, Mr. Hirst will retain his position with the Arkansas department, but will spend most of his time during the period from October, 1929 to June, 1930 at the Peabody College for Teachers, Nashville, Tenn.

The inter-state school-building service will be handled through the Peabody College for Teachers, under the direction of Dr. F. B. Dresslar, an outstanding authority in the United States on schoolhouse planning. The work of the commission will be financed by the Rosenwald Fund, which has agreed to finance the program of the inter-state school-building service for a period of five years. This foundation has in the past made large contributions in the erection of negro school buildings in the South.

that all members will forward any new practices which may be adopted and found desirable.

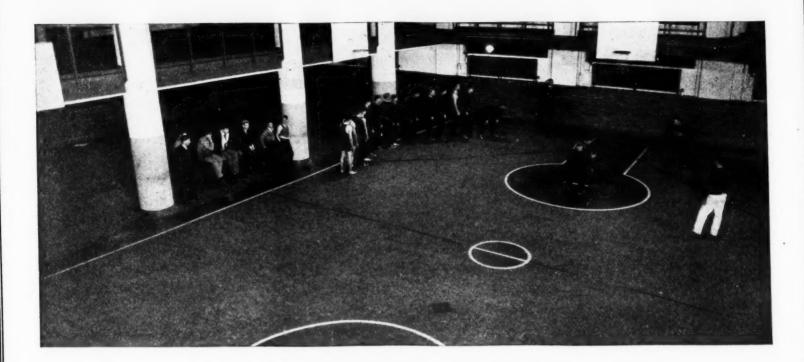
"5. It provides a central point for obtaining information in regard to board problems. The occasion arises frequently where a board is confronted with a problem of policy or practice, when a decision could be reached much more easily, and with greater confidence in its correctness, if it were known how other boards had met the same problem. We plan to establish records from which such information can be promptly supplied. Our secretary will be glad to be of service to any members in obtaining desired information which it is possible to obtain. To this end we ask your cooperation in replying promptly to any questionnaires which may be sent out by him and we will welcome any suggestions for increased service that might be rendered.

"6. It provides an organization for cooperating with the superintendents and teachers. Some superintendents have advised their boards against joining this association, stating that it was an unnecessary duplication of the work of their own organization. Others, who are very short-sighted, have advised against affiliation through fear for their own standing with their boards. These latter believe that, as executive officers and educational experts, they are in a position to give all necessary information and advice to their board members, and the less these members know about school matters the more secure their own tenure will be.

Cooperation Between Boards and

Superintendents
President Jewett took occasion to explain the relations between the Superintendent's Association and the Associated School Boards. He said:

"Both of these groups have a misconception of our organization. The Superintendents' Association and ours are in no sense duplicate, but rather complementary organizations. The superintendents' problems are those of school administration while ours are those of general policy and of providing the school plant and equipment and the finances necessary to carry out that policy. On the other hand, if we are to carry out that policy with intelligence, we must know (Concluded on Page 150)



# MILWAUKEE'S FINEST SCHOOL INSTALLS BLOX-ON-END

The Central Continuation School, Milwaukee, is considered one of the most modern educational buildings in the United States. It was designed by Van Ryn & De Gelleke, nationally known school specialists who for fourteen years have been architects for the Milwaukee School Board.

In specifying BLOXONEND FOR THE BOYS' AND GIRLS' GYMNASIUMS, these architects recognized the fact that this flooring is in harmony with modern school construction. 161 other prominent architects, including nearly all "school specialists," are of the same opinion. It is significant that many of these architects have used BLOXONEND in ten or more schools.





Above all else, BLOXONEND is SAFE. The tough end-grain forms the wearing surface, thus eliminating the sliver hazard which is ever present in ordinary wood flooring. BLOXONEND is firm and fast, yet affords cushion-like resiliency. It is handsome, noiseless, lasts a life-time, stays smooth, and provides satisfactory anchorage for apparatus and machines.

Many School Boards are taking advantage of the Summer Holidays to replace worn gym and shop floors with BLOXON-END. We would be pleased to quote you on a completed BLOXONEND floor to be laid by a guaranteed, definite date. Write for sample and descriptive booklet.

CARTER BLOXONEND FLOORING COMPANY

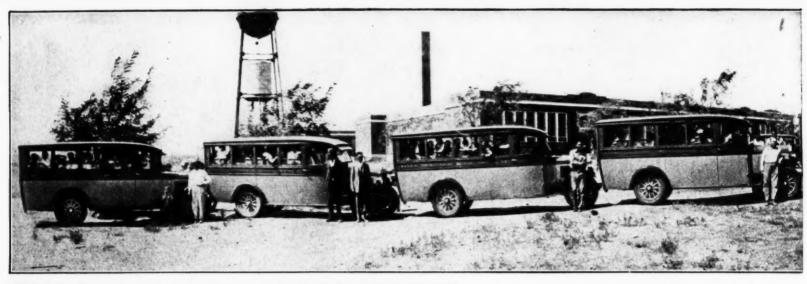
Kansas City, Missouri Branch Offices in Principal Cities

BLOX-ON-END

Bloxonend is made of Southern Pine with the tough end grain up. It comes in 8 ft. lengths with the blocks dovetailed endwise onto baseboards



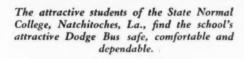
Lay's Smooth Stay's Smooth

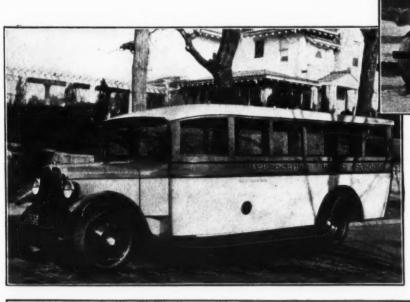




"Recommendations by our neighboring schools prompted us to standardize on the Dodge Brothers School Bus. Our fleet of eight is very satisfactory". So say officials of the Zanies Consolidated School,

Children who attend the South Shore School of Chicago, Illinois, are taken to and from school in an attractive, safe and comfortable Dodge Brothers Bus.





The fine appearance and fine performance of the Dodge Brothers Bus operated by the Parkersburg Public Schools of Parkersburg, W. Va., are in keeping with the city's fine educational system.

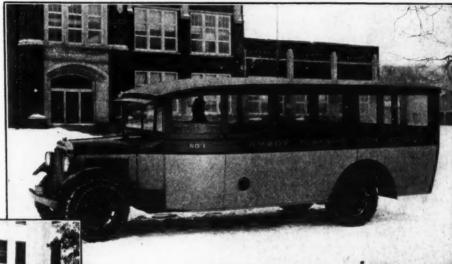
The Radnor School District of Wayne, Pa., is now served by five Dodge Brothers Buses. Repeat orders prove conclusively the dependability, economy, comfort and safety of these modern buses.





District No. 72, Wilson, Oklahoma. Like hundreds of other careful school bus buyers, they have proved by investigation and actual experience how well Dodge Brothers School Buses fit their needs.

A safe ride and a comfortable one—that's what students in the Texas Military Institute, San Antonio, Texas, are sure to get when they step into the Dodge Brothers Bus.



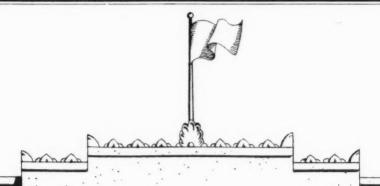
Regardless of weather or road, pupils of the Amboy Township High School, Dixon, Ill., are assured of a safe, comfortable and dependable ride.



Dodge Brothers School Buses are time-tested . . . . . by hundreds of school officials who have supervised their operation . . . . . by thousands and thousands of parents who have watched their children step in and out of them day after day. ¶ Built complete—Dodge body and Dodge chassis—these rugged buses continue year after year to gain in popularity. Children—and therefore parents—like them for their comfort, safety and dependability. Officials value them because of the low initial investment and for their economy of operation.

# DODGE BROTHERS SCHOOL BUSES CHRYSLER MOTORS PRODUCT

SOLD AND SERVICED BY DODGE BROTHERS DEALERS EVERYWHERE



# ONE "GYM" TEACHER...BUT SIXTEEN "GYM" CLASSES AT ONCE

No magic about it.

No magic, that is, except the magic of the Public Address System and the magic of taking one voice and multiplying it as many times as desired . . .

Let the "gym" teacher stay in his office. Let each class-stay in



its room...For now the teacher's voice can visit whatever rooms it wishes and as many at a time as it wishes. Naturally, this miracle of voice distribution is not confined to any one teacher.

### No limit to its uses

It may be applied to the music teacher, leading a selected group of classrooms in song..

Or to the school doctor, giving a health talk.



NAME



Or to the Principal, himself, making his announcements to all or whatever rooms he chooses.

The Public Address System can be made to take the place of the auditorium—either wholly, or in part. This service is particularly valuable in *overcrowded* schools, where the auditorium is not large, enough for the entire student body. . . . Still the wonder does not stop.

The whole school may be *immediately* "tuned-in" on a talk by some important visitor, whose time may be too limited to allow him to talk in each room separately. Or the school may be "tuned-in" on radio itself. Through the Public Address System, students may listen to the actual voices of men who are today making world-history.

This system has its uses *in* the auditorium itself. It can correct bad acoustics if they exist. But it is particularly valuable for training younger children in public speaking.

Through its full, clear amplification, large halls may in effect be made small for small voices. Even the very youngest children may take part in speaking in assembly exercises—without strain or injury to young voices.

The music of the school band playing in the auditorium or elsewhere can be picked up by the Public Address microphone and distributed throughout the building.

Actually, the uses of the Public Address System are legion. (Last, but decidedly not least, there is its incalculably important use as an auxiliary fire-alarm.)



There's much more to tell... But why not let the coupon below bring you more specific information—information direct from Graybar's installation experts?

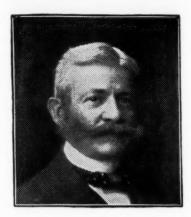
GraybaR
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COUPON—Graybar Electric Co., Graybar Building, New York, N. Y. Gentlemen: Please tell us more about the Western Electric Public Address Systems.

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Especially Adapted for School use The Material ResistsWear-Weather and Handling Promotes Hygiene - Maintains Health Saves Money for Every Taxpayer by Making the Books Last Longer

Samples Free

### THE HOLDEN PATENT BOOK COVER CO.

Miles C. Holden, President

Springfield, Massachusetts



—Supt. F. V. Routt of Alhambra, Calif., has been reelected for another four-year term, with a substantial increase in salary. Mr. Routt has been connected with the Alhambra schools for 23 years.

-Mr. N. J. Bond of Washington, D. C., has been elected superintendent of schools at Georgetown, Pa., to succeed A. L. Harrington.

—Mr. M. V. Hartsook of Hilliards, Ohio, has been reelected for another year. —Mr. H. L. Point of Walnut Grove, Minn., has been elected superintendent of schools at Ellendale.

-SUPT. O. W. FUNKHOUSER of Xenia, Ohio, has been reelected for a sixth consecutive term. -MR. HAROLD MONTGOMERY of Kingston, Mich.,

has been elected superintendent of schools at Meta-

-Mr. H. L. Sheibler of New Dover, Ohio, has been elected superintendent of schools at Tiro.

-Supr. J. G. Collicott of Columbus, Ohio, has been reelected for a five-year term, with an increase of \$500 per annum.

—Supt. K. R. Vermilion of Gallipolis, Ohio, has resigned to accept a place in the Cleveland schools.

-Mr. J. M. REED of Risingsun, Ohio, has been elected principal of the high school at Fostoria.

-Supt. H. L. Bates of Jackson, Ohio, has been reelected for a new term of three years

-Mr. Edward D. Myers, superintendent of schools at Catskill, N. Y., will retire on August 1, after 32 years of school administrative work. During the forty years of his service, Mr. Myers had never been absent from his school duties.

—Mr. J. H. Ketring of Shipman, Ill., has been elected superintendent of schools at Bunker Hill, to succeed H. D. Willard.

-MR. H. L. BARKER has been elected superintendent of schools at Bangor, Mich.

—Mr. E. L. Bowsher of Ashland, Ohio, has been appointed a member of the board of trustees of the Kent State College. Mr. Bowsher was recently reelected for a five-year term as head of the local schools.

-MISS MAISIE E. QUINN has been appointed assistant superintendent of schools at West Warwick,

-Mr. N. C. Johnson of Shoshoni, Wyo., has been elected superintendent of schools at Mountainview.

—Mr. I. E. Stutsman, formerly superintendent of high schools in Logan county, Colo., has been elected superintendent of schools at Greeley.

—SUPT. C. L. LITTEL of Centralia, Wash., has been reelected for a seventh consecutive term.

—Mr. E. B. Thomas, formerly principal of the Burbank Junior High School, Redondo Beach, Calif., has been elected superintendent of schools, to succeed J. B. Potter.

-SUPT. JOHN DIETRICH of Helena, Mont., has resigned after a service of nineteen years. Mr. Dietrich will be retained in an advisory capacity by the board for a three-year term.

-Supt. J. E. McCleery of Rochester, Wash., has been reelected for another year.

-MR. D. E. CLOYD, a former superintendent at Huron, S. Dak., and at one time head of the education department of Des Moines College, died at Sioux Falls, S. Dak., at the age of 65.

—Mr. James A. Lobban, formerly principal of the high school at Webster, Mass., has been elected superintendent of schools, to succeed C. R. Stacey, who has gone to Brewster.

—Mr. I. M. Wrigley of Mt. Pulaski, Ill., has been elected superintendent of the high school at Villa Grove.

—Mr. M. M. Berry has been elected superintendent of schools at Parma, Ohio. Mr. A. G. Yawberg of Cuyahoga county, has been elected superintendent of schools at Berea, to succeed Mr. Berry.

-MR. LEO W. BREUER, formerly of Cordova, —MR. LEO W. BREUER, formerly of Cordova, Alaska, was recently appointed commissioner of education for Alaska for a two-year term, beginning with July 1. Mr. Breuer, who succeeds Lester D. Henderson, is a graduate of the Bellingham, Wash-

ington, State Normal School, and the University of Washington. He holds a degree from the University of Washington and has a school experience covering a period of ten years as a teacher, high-school principal, and superintendent of schools in Washington and Alaska.

-Supt. E. W. Montgomery of Phoenix, Ariz., has been reelected for a second four-year term.

-MR. ROBERT L. STONE of Hackensack, Minn., has been elected superintendent of schools at Cass

-Supt. L. A. Walker of Swanton, Ohio, has been reelected for a third consecutive term.

—Mr. R. M. Robinson of South Beloit, Wis., has been elected superintendent of schools at Kewanee,

-Mr. Charles S. McVay of East Liverpool, Ohio, has been elected principal of the high school at Brilliant.

—Mr. Ernest W. Robinson of Fitchburg, Mass., has announced his resignation as superintendent, after the completion of twelve years of service.

—Prof. J. C. Brown has resigned as president of the DeKalb State Teachers' College at DeKalb, Ill.

—Supt. L. B. Sayre of Otho, Iowa, has been elected superintendent of schools, to succeed J. E. Thomas.

-MR. H. G. MEANS of North Braddock, Pa., has been elected superintendent of schools at East Liverpool, to succeed C. S. McVay.

-Supt. H. R. Best of Wagner, Iowa, has been reelected for another year.

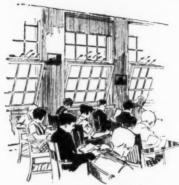
-SUPT. JOHN H. HOLLAR of Sanford, Colo., has been reelected for the coming year.

—Mr. T. J. Berning of Lakefield, Minn., has been elected head of the statistical division of the state education department. Mr. Berning assumed his new work on July 1.

SUPT. W. R. REED of Milan, Tenn., has been reelected for another year.

-SUPT. L. H. WAUGH of Saugatuck, Mich., has been reelected for a new term of two years.

-Mr. Walter Cook has been elected superintendent of schools at Lexington, Mich., to succeed Clarence Schantz.



**Draftless Ventilation** 

Williams Reversible Window Equipment is particularly well suited to school buildings because it allows the maximum of fresh air, while completely eliminating the draft. Ideal, easily controlled overhead ventilation can be obtained by tilting either sash to any desired angle.

## As Cleaning Costs Mount to Millions, Consider This-

American schools pay millions annually to keep windows clean. In one city school system last year, cleaning and custodial service cost \$1,080,540. Some of this could be saved next year and for a score or more of years to come, by installing Williams Reversible Window Equipment in all new school buildings.

For 25 years, manufacturers and installers of Williams Reversible Window Equipment.



**Economy in Cleaning** 

Williams Reversible Window Equipment makes it possible to completely reverse both sash of a window to permit cleaning of both sides of the glass from inside the building. This makes window cleaning easier, quicker and more safe than with ordinary buildings and results in a substantial reduction in cleaning costs.

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### WILLIAMS REVERSIBLE WINDOW EQUIPMENT Clean Your Windows from the Inside

E. 37th St. AT PERKINS AVE. CLEVELAND, OHIO

SASH COMPANY

SUPT. C. F. RIDGLEY of Logan, Ohio, has been reelected for another three-year term.

-Supt. L. G. Andrews of Navasota, Tex., has been reelected for another year.

-Supt. C. E. Teague of Sanford, N. C., has been reelected for another year.

-MR. F. L. REDEFER of Port Washington, N. Y. has been elected assistant superintendent of schools at Glencoe, Ill.

—Mr. A. R. Johnson of Montrose, Iowa, has been elected superintendent of schools at Bonaparte, to succeed K. C. Harder, who has gone to Woodbine.

-Mr. F. R. RICHARDSON of Spencer, N. C., has been elected superintendent of schools at Marion, to succeed C. W. E. Pittman.

—SUPT. M. M. VAN PATTEN of Buhl, Idaho, has been reelected for a fifth consecutive term.

-SUPT. CARL M. HORN of Bad Axe, Mich., has been reelected for another year.

—Mr. S. R. Boring of Flat Rock, Ind., has been elected superintendent of schools at Fortville, to succeed L. M. Luce.

—Supt. Glenn D. King of Garfield Heights, Ohio, has been given a life membership in the National Education Association, as a gift of the teachers and principals in the schools.

-MR. E. S. Kerr, assistant superintendent of schools at Canton, Ohio, has been reelected for another year.

—Mr. John T. Kaemmerlen of Haverstraw, N. Y., has been elected superintendent of schools at Catskill, to succeed E. D. Myers.

-SUPT. R. E. BRIGHT of Humboldt, Tenn., has been reelected for another year.

-Mr. H. L. Shibler of New Dover, Ohio, has been elected superintendent of schools at Tiro.

—Mr. Lee O. Dawson of Stronghurst, Ill., has been elected superintendent of the high school at East Moline. He succeeds L. F. Fulwiler.

-Mr. Otts Keeler of Melvin, Ill., has beleeted superintendent of schools at Marshall.

-Mr. Frederick G. Neel of Fairmount, Ind., has been elected superintendent of schools at Elliotts-

-MISS ANNA E. LOGAN, for the past fourteen years assistant superintendent of schools at Cincin-

nati, Ohio, retired at the close of the school year

because of failing eyesight. Miss Logan, before her appointment in 1915, was a member of the faculty at Miami University. In 1914 she was secretary of the Department of Superintendence of the National Education Association.

Miss Logan was one of the chief factors in the development of the curriculum and methodology of

the elementary schools.

-Mr. G. G. ELY, formerly principal of the Jarrett Junior High School, Springfield, Mo., has been appointed state high school inspector, to succeed erett Deardorff.

—Mr. E. B. Allbaugh has been elected superintendent of schools at Concordia, Kans., to succeed G. H. Jaggard.

-MR. H. A. LITZNER of Concord, Mich., has accepted the superintendency at Van Dyke.

—Mr. F. R. CALDWELL of West Newton, Ind., has

been elected superintendent of schools at Paoli.

Mr. D. R. LEECH of Harvard, Nebr., has been elected superintendent of schools at Albion.

-MR. R. W. KRAUSHAAR of Mobridge, S. Dak., has been appointed state inspector of high schools.

—Mr. Byron W. Hartley of Louisville, Ky., has accepted the superintendency at San Antonio, Tex. Mr. Leslie R. Gregory has been elected to succeed Mr. Hartley at Louisville.

—Supt. E. R. Van Kleek of Walden, N. Y., has been reelected for the next year, with a substantial increase in salary.

-Supt. W. S. Heusner of Salina, Kans., has been reelected for another two years, and his salary increased to \$6,000.

-Mr. David A. Ward, superintendent of schools at Wilmington, Del., has accepted the superintendency at Chester, Pa., at a substantial increase in

—Mr. Thomas C. Miller, who died recently at Fairmont, W. Va., at the age of 80, was one of the notable educational leaders. He was superintendent at Fairmont for several years, was state superintendent, was on the faculty of the State University, and principal of the Shepherdstown Normal School, and during the last years of his life was again in the service of the State University. For nearly sixty years, Mr. Miller was in direct educational service

as teacher, superintendent, state superintendent, principal of a normal school, or in service at the University.

-Dr. Henry S. Curtis has resigned his position state director of hygiene and physical education for Missouri.

—Mr. George Riley, formerly principal of the high school at Rogersville, Mo., has been elected superintendent of schools, to succeed Mr. Silas Ben-

—Mr. E. B. Brown of Fairfax, Okla., has been elected superintendent of schools at Hominy.

—Miss Bess R. Johnson, school nurse of Des Moines, Iowa, and a former school teacher, has been appointed principal of the new D. W. Smouse Opportunity School to be erected in Des Moines. Miss Johnson will spend the first part of the next school year in special study at Columbia University preparatory to assuming her new duties.

—Mr. C. W. Peacock has been elected superintendent of schools at LaFayette, Ga., to succeed D. A. Snow.

-MR. S. A. DENISON of Pontiac, Ill., has accepted the superintendency at Glen Elyn.

—Mr. B. O. Fry has accepted the superintendency at Byromville, Ga. He succeeds L. H. Davis.

—Supt. E. A. Schimke of Penwater, Mich., has been reelected for another year. —Mr. A. J. Gibbons has been reelected assistant superintendent of schools at Manchester, N. H., for a term of five years, at a salary of \$5,000. The assistant superintendent has saved the city thousands of dollars through wise purchasing and by keeping a careful check on the supplies.

—Mr. J. L. VAN GILDER, principal of the high school at Republic, Kans., has been elected superintendent of schools, to succeed J. W. Clark.

-SUPT. J. C. DIEHL of Erie, Pa., has been reelected for another year, with a substantial increase in salary.

—Mr. Charles L. Belles, formerly superintendent of the Fountain county schools of Indiana, has accepted the principalship at Brownsburg.

—Mr. Frederick G. Neel, formerly superintendent of schools at Fairmount, Ind., has resigned to accept the principalship at Ellettsville in Monroe

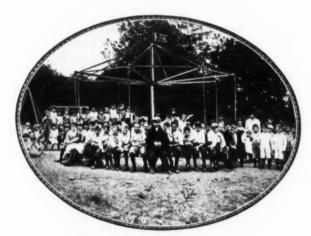
(Concluded on Page 94)

# Children Like MITCHELL "Betterbilt" Playground Apparatus



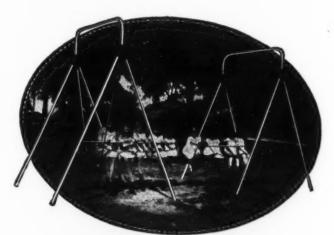
Mitchell "Betterbilt" Playground Apparatus gives them many hours of healthy, happy fun and exercise. It is attractive, safe and easy to operate, and allows them to play contentedly during the recess period and after school away from dangerous traffic on the streets.

School boards can easily solve the problem of providing amusement and well-rounded exercise for the children by equipping school yards with Mitchell Apparatus. They can choose from a large variety of equipment which meets the requirements of every size or type of school yard. Mitchell Playground Apparatus is designed upon recognized sound principles of physical development and recreation and has the background of thirty-five years of successful manufacturing experience. Write, today, for free illustrated catalog.



Mitchell Whirl No. 500

The Mitchell Whirl accommodates 1 to 50 children at the same time. Children can board or leave it at will while in motion. Easily operated by a single child. Requires no supervision. Gives many years of service with minimum upkeep. Sturdily built, with high carbon steel angles, trusses and rails.



Mitchell Swing-Bob No. 600

The Mitchell Swing-Bob is ideal equipment for the younger children—furnishing healthful exercise and amusement to from one to twenty children at a time. It is designed to eliminate any possibility of injury. Reinforced platform and continuous guard rails insure safety. Will last many years.

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(Concluded from Page 92)

—Mr. Jeremiah E. Burke, who recently completed 25 years of service in the Boston school system, has been head of the Boston schools for the past eight years. During the period of his service, Mr. Burke has witnessed many changes and improvements in the schools. Teachers are better trained, the program of study has become more diversifed, and more pupils are being educated than ever before. ever before.

ever before.

—Supt. James P. Eskridge of Florence, Colo., has been reelected for a new term of five years. Mr. Eskridge had completed nine years of service.

—Mr. David G. Small has been appointed principal of the high school at Fowler, Ind., to succeed Mr. Gale Smith, who has become superintendent at

Rensselaer.

—Supt. B. J. Brophy of Gas City, Ind., has resigned from the superintendency to continue his graduate studies at the University of Michigan.

—Supt. O. W. Hogue of Lyons, N. Y., has been reelected for the next school year, at a salary of

—Mr. Frank A. White of Stanwood, Iowa, has been elected superintendent of schools at Sterry.

—Mr. Hugh P. Liggett has been elected statistician for the public-school system at Johnstown, Pa. Mr. Liggett was formerly administrative assistant to the principal of the high school.

—Supt. F. C. Densbergen of Kenmore, N. Y., has been reelected for another year, at a salary of \$6, 000 per year.

—Supr. L. G. Andrews of Navasota, Tex., has been reelected for the next school year.

—Supt. Walter Schwalje of Long Beach, N. Y., has been reelected for a seventh consecutive term, with a substantial increase in salary.

-Supt. C. E. Joiner of LeRoy, Ill., has been rected for his eleventh consecutive term, at a salelected for his ary of \$3,600.

-Supr. H. D. Kies of Mankato, Minn., will retire at the end of the school year.

—MR. EUGENE S. FARLEY, of the School of Education, University of Pennsylvania, has been elected director of the department of reference and research at Newark, N. J.

—MR. STANLEY H. ROLFE, formerly principal of the Wilson School at Newark, N. J., has been elect-ed assistant superintendent of schools, to succeed Mr. E. K. Sexton.

-Mr. Frank A. Douglas, who died recently in —Mr. Frank A. Douglas, who died recently in Cleveland, Ohio, was for 32 years superintendent of schools at Winthrop, Mass. At the time of his retirement in 1927, he was one of the oldest superintendents in the matter of service in the state. He went to Winthrop in 1891 as principal of a grammar school. After serving in this capacity for four years, he was made superintendent of schools. During his period of service, he saw the school system years, he was made superintendent of schools. During his period of service, he saw the school system grow from a small group to a student body of 3,300 pupils with 120 teachers. The community had grown from a small village to a residential suburb of nearly 20,000 population. A number of the former pupils and friends of the deceased superintendent attended the funeral service which took place at

winthrop.

—Supt. J. H. Beveringe of Omaha, Nebr., has been made an honorary member of the Ohio University chapter of Phi Beta Kappa. Mr. Beveridge will be visiting professor on the staff of the college of education of the University of Cincinnati during the summer session. the summer session.

—Dr. E. J. Ashbaugh, formerly assistant director

—Dr. E. J. Ashbaugh, formerly assistant director of the bureau of educational research of Ohio University, has been appointed dean of the school of education of Miami University. Dr. Ashbaugh was chief of the bureau of the University of Iowa from 1914 to 1921, and had been assistant director of the bureau at Ohio University for eight years.

—Mr. R. L. Hunt of Las Animas, Colo., has been elected superintendent of schools at Madison, S. Dak. In his new position, Mr. Hunt becomes director of secondary education in the State Teachers' College.

College.

—Mr. E. D. Combs has recently been appointed president of the State Teachers' College at Fredericksburg, Va.

—SUPT. SIDNEY PICKENS of Batesville, Ark., has

been reelected for a twenty-first consecutive term.

—Supr. H. A. Babb of Mt. Sterling, Ill., has been

reelected for a new term of two years.
—SUPT. W. H. ANGEL, of Dennison, Ohio, has been reelected for a new term of four years.

—Supt. L. S. Graves of Norton, Minn., has been reelected for another year.

—Supt. E. E. Irwin of Lapeer, Mich., has been reelected for another year.

—Mr. C. A. Strozier has been elected superin-

tendent of schools at Newkirk, Okla.

—A testimonial dinner to Supt. Randall J. Condon of Cincinnati, Ohio, was given on June 17, under the auspices of combined civic organizations.

—Mr. Joseph Keating of Turners Falls, Mass., has been reelected for the fifth consecutive time as superintendent of schools at Montague, Mass.

—Mr. Conrad C. Muehe has been elected superintendent of schools at Naples, N. Y.

—Mr. A. R. Johnson has been elected superintendent of schools at Bonaparte, Iowa. Mr. Johnston was formerly at Montrose.

—Mr. I. A. Whemple of Hanlonton, Iowa, has been elected superintendent of schools at Woodhull.

—Mr. W. R. Smith has been elected superintendent of schools at Goose Creek, to succeed J. C. Ingram.

gram.
—Supt. Leonard Young of Duluth, Minn., has

been reelected for another year.

—Mr. M. M. Barry of Berea, Ohio, has been elected superintendent of schools at Parma.

—Mr. J. R. Underwood of Bridgewater, Iowa, has been reelected for another year.

—SUPT. E. S. Dreher of Stanton, Mich., has been reelected for the stanton of the stant

—Supt. E. S. Dreher of Stanton, Mich., has been reelected for another two-year term.

—Mr. Frank W. Phillips of Freeport, Ill., has accepted the superintendency of the training school at the Northern Illinois Teachers' College, DeKalb.

—Supt. M. J. Crawford of Caro, Mich., has been reelected for another year.

—Mr. E. J. McNamara of Mt. Vernon, Wash., has been elected superintendent of schools at Longview.

—Mr. D. F. Montgomery, superintendent of schools at Belleville, Ark., died in a Little Rock hospital on May 8.
—Supt. H. N. Rohm of Cambridge, Ill., has been reelected for a sixth consecutive term of service.

—Supt. F. A. Yoke of Clarksburg, W. Va., has been reelected for another year.

—Supt. B. F. Stanton of Alliance, Ohio, has

been reelected for a new two-year term.

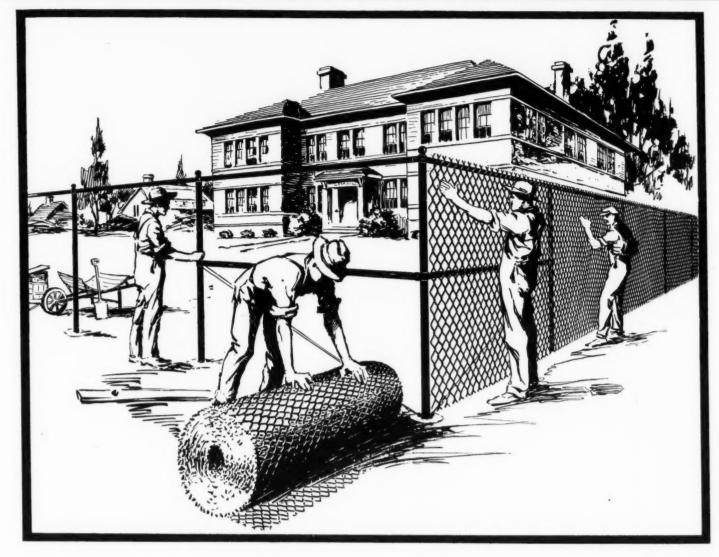
—Supt. H. A. Hartman of Sidney, Ohio, has been reelected for a five-year term.

—SUPT. J.T. RILEY of Anadarko, Okla., has been elected superintendent of schools.

—Mr. A. W. Baldwin has been elected superintendent of schools at Covington, Ga. -Supt. O. C. Echols of Lacon, Ill., has been re-

elected for the next year. —Mr. T. W. EVERITT of Biggsville, Ill., has been elected superintendent of schools at Astoria.

-Supt. J. A. Van Natta of Sturgeon Bay, Wis., has been reelected for a new three-year term.



## Install Cyclone Fence Now -during vacation!

This is the logical time to enclose your schoolgrounds with Cyclone Fence. During vacation, children do not interfere with installation of fence. nor does the erection crew interrupt the children's playground activities. The fence can be erected more quickly and efficiently at minimum cost. Your playgrounds will be safe when school opens

Cyclone Fence keeps children out of the streets where thousands are killed every year. Gates can be placed at points of least danger. Children enter and leave the grounds in a safe, orderly manner. School property is protected from marauders at all times.

Made of copper-bearing steel, and erected on H-Column Posts, Cyclone Fence combines tremendous strength with utmost durability-provides positive protection at low cost per year. One of our trained crews, stationed near you, will erect your fence and take complete responsibility for the finished installation. Phone, wire or write for prompt, efficient fence service.

Cyclone Chain Link and Wrought Iron Fences are made in a variety of designs for schools, playgrounds, athletic fields, parks, cemeteries, estates, residences and industrial property of all kinds. We also make tennis court backstops and enclosures, window guards and sectional partitions.



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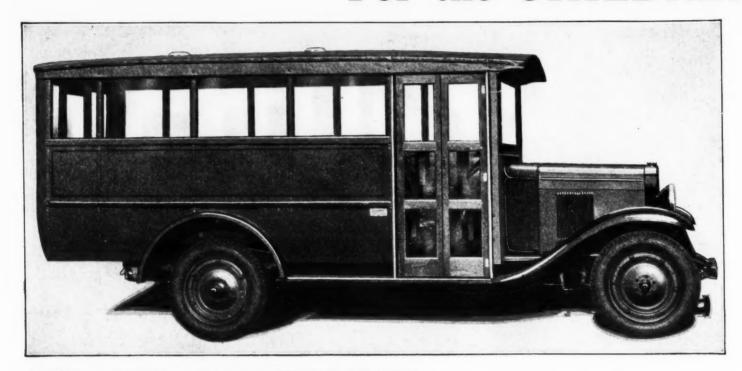
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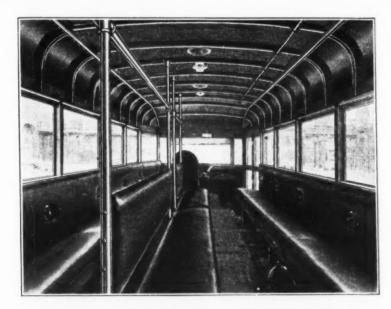
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## THEN COMFORT --THEN ECONOMY

THAT is the order of consideration in the design and construction of WAYNE School Coach Bodies. What does price, what does appearance, what does any other consideration matter if the children entrusted to you are not transported safely? That's why safety is our first consideration. Why handicap a modernly equipped plant and an efficient teaching staff by delivering your pupils unresponsive and unretentive after a ride in an unsanitary, noisy vehicle, damp and chilly one day and dusty the next? That's why comfort comes next. And finally—if your bus is safe and comfortable it necessarily follows that it must be properly designed and built of carefully selected materials, long-lived and sturdy—in short, a WAYNE.

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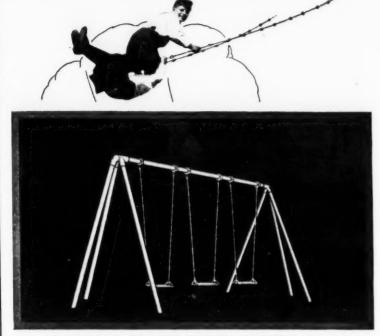
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STANDARD THREE-SWING OUTFIT No. 313

Built considerably heavier and stronger than the average three-swing outfit, this apparatus has a record of not a single personal injury and not a single case of one wearing out in the twelve years since it was introduced.

Full 3-inch overhead pipe with six 2-inch supports. Swing hangers are the double race, self-contained ball bearing type not found on any other make of three-swing outfit. The long link swing chains and improved swing stirrups are the same as are furnished in the larger FUN-FUL swings. Height over all, 12 feet; length over all, 25 feet; width over all, 12 feet.

The complete Hill-Standard FUN-FUL line includes Giant

Strides, Ocean Waves, Chutes, Seesaw Boards, Trapeze, Climbing Poles and all kinds of Playground and Swimming Pool Equipment.



### The Favorite Play Equipment of American Schools

FUN-FUL Playground Equipment is the product of nearly thirty years' experience devoted exclusively to the development and manufacture of children's outdoor, health-building goods.

A greater selection of standard, approved play equipment is offered in the FUN-FUL line than in any other, and, because of three hundred factory agents scattered strategically throughout the country, Hill-Standard is able to provide service and maintain an interest in its customers beyond comparison. This, and the fact that point-for-point—safety, durability, economy and pleasure-giving quality — FUN-FUL Playground Equipment excels every other make accounts for the fact that more Hill-Standard apparatus is used on American school grounds than any other kind.

> We will gladly send complete information on any type of play equipment.

### DIVISION F

# HILL-STANDARD CO. Anderson, Indiana, U.S.A

Largest manufacturer of playground and swimming pool equipment



### RECENT LEGISLATION IN NEW YORK STATE

The law division of the New York State education department has issued a list of the amendments approved by the state legislature of 1929. Of the 25 amendments, approximately eleven are of educational importance.

Chapter 128 amends section 876 of the education law, and enables city school districts having boundaries not coterminous with city boundaries, to purchase property in the name of the board of education.

Chapter 140 amends section 310 and 311 of the public health law, by requiring all school children in any city of 50,000 population to be vaccinated prior to admission. It requires physicians to give additional information in filing records of vaccinations

Chapter 255 amends section 382 of the educa-tion law and disqualifies teachers and superin-tendents of schools from holding the office of school

Chapter 257 amends the education law in rela-Chapter 257 amends the education law in relation to the period of time required by law for the attendance of pupils. Under the amendment, pupils are required to attend school 190 days, inclusive of legal holidays, which fall within the school term, and exclusive of Saturdays.

Chapter 259 amends the education law by authorizing boards of education of all districts, exceptive school districts in cities having a population

city school districts in cities having a population of over 50,000, to borrow money in anticipation of

of over 50,000, to borrow money in anticipation of public moneys.

Chapter 357 adds a new subdivision authorizing the commissioner of education for the school year ending July 31, 1929, to apportion to each district employing but one teacher, the sum of \$1,300, less the amount of a four-mill tax on each dollar of actual valuation of the taxable property of the district. Such amount is to be increased \$100 for each of the succeeding two years. A district may not receive more than the difference between a four-mill tax on actual valuation and its expenditures; but no district may receive less than \$425.

Chapter 358 amends section 491b of the education law, by authorizing the commissioner to apportion an equalization quota to districts not maintain-ing an academic department which employs two or more elementary teachers. The former statute or more elementary teachers. The former statute limited the quotas to districts employing five or more elementary teachers.

Chapter 369 amends the public health law, and

Chapter 369 amends the public health law, and extends to July 1, 1930, the time in which every public, private, and parochial school in any city, village, town, or fire district having a general fire-alarm station and electrical fire-alarm system, must provide a fire-alarm box on the premises or in the building on such premises.

Chapter 702 amends the workmen's compensation law, by specifically excepting from its provisions, persons engaged in teaching capacities.

### NEW JERSEY SCHOOL LEGISLATION

—Among the numerous educational bills passed by the 1929 legislature of New Jersey are six of special importance to school systems of the state. Senate bill No. 11 allows any county and one or more municipalities in the county, and one or more school districts to initially contract to provide

school districts, to jointly contract to provide public health service for furnishing nurses, medical inspection, clinics, and dispensaries in the school

Senate bill No. 82 allows school districts to issue bonds for the improvement of lands for school pur-poses and for buildings for school purposes other than school buildings.

Senate bill No. 191 allows districts of 10,000 or more inhabitants with appointive boards the right of a referendum vote, to determine whether the board is to be elected by the people or appointed by the chief executive officer.

Senate bill No. 192 allows school districts to operate cafeterias and school boards to provide equipment, supplies, and service for the promotion of the health of pupils.

of the health of pupils.

Senate bill No. 193 provides that high schools throughout the state already designated by boards of education of districts lacking high schools for their pupils, or a portion of them to attend, will be deemed the high schools which such pupils will secure from the commissioner of education approval for a change in such existing designation. The receiving district must determine the rate of tuition which in such a case will exceed the actual cost per pupil.

Another bill provides that in second-class districts with a population in excess of 180,000, the members of a board of education are to be appointed by the director of the board of freeholders

### LAW AND LEGISLATION

LAW AND LEGISLATION

The Wisconsin department of public instruction, in a recent statement, has ruled that under the statutes, neither the school board nor the teacher may permit an order of the schools to be interfered with by some mischievous or refractory pupil in school. The department stresses the fact that the welfare of the school must be guarded and that it is the duty of the teacher and board to see that this is done.

The department, in its ruling, pointed out that the courts of the county have held to the rule that any conduct of a pupil on his way to and from school which has a tendency to interfere with the proper discipline of the school subjects him to punishment of some kind, and in some cases, to suspension from school. In unusual cases, it is the duty of the teacher to take up the matter with

duty of the teacher to take up the matter with the members of the school board, and to advise

the members of the school board, and to advise suspension from school.

—The appellate court of California was recently asked to give a decision in the case of a Sacramento elementary-school principal who was arrested by the mother of one of the pupils for chastising the child. The principal was discharged by the court after the testimony had been heard.

In the State of California, at least, a teacher has the right to correct a pupil by using corporal punishment. This right, of course, may not be abused, and if carried to such an extent as to cause an injury to the child, may render the teacher liable civilly and criminally. Whether the punishment inflicted has been reasonable or not is always a question of fact. It is safe to say that when a child is so punished as to injure him, then the punishment is unreasonable.

It seems quite clear that a form of punishment requiring the child to work on the land of a private person such as grubbing out stumps, is most unreasonable and cannot be legally inflicted. There are many proper means of correction at the teacher's command so that it is almost impossible for him to justify his act. Any injury caused a pupil through such a punishment would, without doubt, be a natural consequence of the act of the teacher, and he, not being able to sustain his action, would be held liable.

# There's a Durabilt Lockerf

When selecting steel locker equipment for a new school, an addition, or for one that is being re-furnished or provided with additional facilities, the most satisfactory results will follow only when the correct type and size of locker is installed for each particular storage requirement.

There are definite types and sizes of Durabilt Steel Lockers for every school use. The illustrations display a few of the many outstanding and popular ones that are giving satisfaction in prominent schools in every locality.

The recessed type is most practical and desirable where the construction

of the building will permit a recessed installation. In designing new buildings and additions this feature is usually given careful consideration. However, there are many buildings where lockers cannot be recessed, then free standing lockers can be placed in corridors, alcoves, or separate locker rooms.

Full length, single tier, clothing lockers provide the maximum storage service. Double tier lockers are handy where floor space is limited and small pupils are the users but we usually recommend the Durabilt Two-in-One type or the Two Person Locker as illustrated below because of the greater hanging

Multiple Tier (Box) Lockers have a wide field of usefulness in gymnasiums, classrooms and vocational departments. They admirably fill the need for small storage space for shoes, togs, books, tools, and work materials. Many school authorities prefer them to racks in connection with basket storage because of their security features.

Storage Lockers with adjustable shelves provide exceptionally handy storage for school supplies of all description. A unit placed in each classroom will often solve the problem of how to reduce losses of stationery supplies, etc., that must always be kept available for ready use.

Manual training departments, vocational schools, etc., have many storage demands that can be filled by installing several Cord and Tool Lockers for the various shops and stock rooms.

Shoe Lockers, either single tier or double tier, are often recessed in the gymnasium walls where they are out of the way yet easily accessible for members of gym classes who may require only gym shoe storage. gym shoe storage.

Where more spacious gym storage is required then an installa-tion of gym lockers as illustrated is exceptionally efficient and con-serving of floor space.

The Art Director will favor an installation of Durabilt Art Room Lockers because of the discipline and orderliness that is maintained where this type of equipment is used. Durabilt Art Room Lockers, with or without doors, cost less than wooden equipment and have many other features of superiority. They can be recessed in walls the same as standard lockers.

These are but a few of the many details upon which the Durabilt Organization of Locker Specialists is prepared to give you

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expert assistance.

Hundreds of discriminating buyers call on us regularly for ad vice and help in planning their locker installations and a Durable Sales Engineer is available to assist in the preparation of Locker and specifications that will insure a satisfactory installation for Should you be contemplating the purchase of Locker equipment is the opportune time to order so that everything will be a second to the Fall of the Sales.

now is the opportune time to order so that everything readiness for your needs when schools open in the Fall Send in your plans and specifications for a quotation

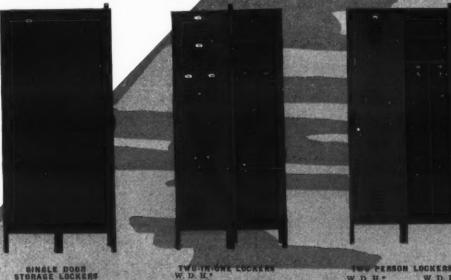
desire further information send for our fourteen p. No. 6000. This will place you under no obligate nearest Sales Office or write us direct at Aur







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# for Every Requirement



July

# Let Durabilt Steel Cabinets S

A need has existed, for years, in the Educational Field, particularly in Vocational and Technical High Schools, for a well rounded out line of Steel Storage and Wardrobe Cabinets which would permit a multiplicity of interior equipment combinations for various storage applications.

In response to these apparent needs the Durabilt Organization of "Storage Specialists" designed a Quality Line of Cabinets which embody all of those features so desirable for efficient and economical storage in the modern school.

The illustrations shown here depict but a few of the thousands of uses and are presented to help visualize what can be done in the arrangement of interiors with standard interchangeable units and equipment.

Durabilt Steel Cabinets are unlimited in application. Their range of uses is so wide, due to the numerous sizes available and combinations of adjustable interior equipment, that they readily solve all storage problems.

Durabilt Steel Cabinets are made throughout of No. 20 gauge full cold rolled, patent leveled enameling steel. The use of this heavy steel, scientifically fabricated, permits the storing of heavy loads in any Durabilt Cabinet. (Note illustration of a Double Door Tool Cabinet, bottom of page at right, which shows a 78" cabinet rigidly supporting more than 1000 lbs. of dies, jigs, etc.)

It is real economy to buy Durabilt Steel Cabinets because, year in and year out they will withstand the hard use and abuse to which school storage equipment is subjected. Then too, there is no wasted space, because

Then too, there is no wasted space, because a Durabilt Cabinet, properly selected, enables the full and complete utilization of the storage space it provides.

Because Durabilt Cabinets are built on the unit principle, in a wide and sufficient range of sizes to meet all requirements, they eliminate all problems that formerly arose with wood cabinets when necessary to re-locate them due to changes in classrooms, shops, or layout. They can readily be moved to a different location without tearing the cabinet down or removing the contents, and the interior equipment can easily be rearranged to suit changed requirments. This feature is lacking in built-in wooden equipment.

We would appreciate an opportunity of working with you on your storage plans and to offer detail suggestions as to the exact Durabilt Steel storage equipment to satisfactorily fill your requirements.

Durabilt Steel Cabinets, in standard sizes are carried in stock for prompt shipment. If you desire further information and prices write for a copy of Folder No. 5050 or we will be glad to quote prices on those items which require special equipment. Write us direct at Aurora or phone our nearest Sales Office. No obligation, of course.



TEACHERS' CABINET (Full Height Partition)

Left-hand Wardrobe Compartment

Compartment
W. D. H.
C7853CFL—36x18x78\*

tight-hand Wardrobe Compartment W. D. H. 17.53CFR—86x18x78"

Complete with four heat acress police and occupilly wardrobe shelf with so of and hook washing in classrooms, distoratory and elevative a reachers "Combination" Cabinet is extremely valuable for the complete acres with the complete books, drays asserting the complete washing and the plant.





WARDROBE CABINET

C7854W-96x21x78"
C7855W-92x4x78"
Complete with hat shelf, cost not and hook assembly.
Durabilit Wardrobe Cabinets providualistic and account for the hat hook assembly completely for the hat had been personed. The costs, sic. of eight to been personed.



"DOORLESD" BOOK CAL

W. D. H.
C6650D—36x 9x66
C6651D—36x12x66
C7850D—36x 9x76
C7851D—36x12x78



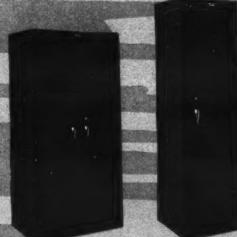
Complete with one shelf.

1914" wide Cabinets have
one door, 35" wide have two



W. D. H. C7853CBL—36x18x78" C7854CSL—36x21x78"

Complete with three half storage shelves, one combination storage and had shelf with half cost and hook assembly.



STORAGE CABINET W. D. E.

Complete with four shelves.

There are many places where corner of first, books, ledgers, office appliance, miscellaneous stationers and other articles that do not need expensive, fire-proof vault storage

### WARDROBE CABINET (With Single Deer)

Complete with hat shelf tout rod and hook assembly STORAGE CABINET

W. D. H. C66028-10 4 x18x66" C66048-10 4 x21x66" C78048-10 4 x21x78"

## COUNTER HIGH CABINET

C42548—36x21x42" C42558—36x24x42"

### NOTE:

All cabinet dimensions listed are overall.

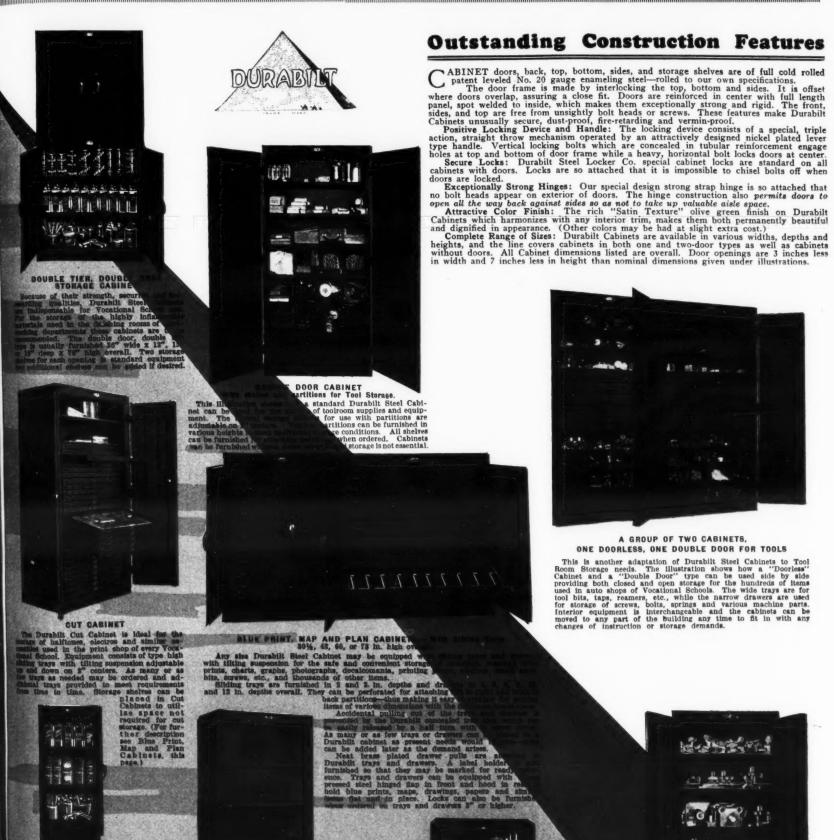


JANITORS' GABINET (Short Partition)

W. D. H. C7859CSR—36x18x78\* C7854CSR—86x21x78\* C7855CSR—86x24x78\*

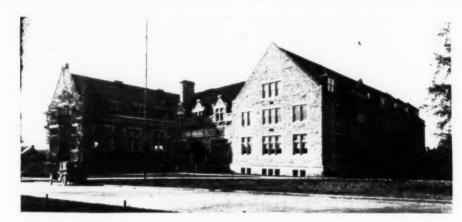
Complete with three half storage one combination storage and half with half coat red and hook assessment

# Solve Your Storage Problems



Mo better built than Dumbilt!

### NOTRE DAME PROTECTS LIBRARY FLOORS WITH



The Beautiful Notre Dame Library, Notre Dame, Indiana
Floors protected with CAR-NA-VAR
Architect: Edward Lippincott Tilden New York City.



Easily applied with a mop

CAR-NA-VAR is a COMBINATION of varnish and floor wax. The varnish content gives durability and a brilliant finish. The wax contributes pliability, thus preventing marring, scratching or checking.

The nearest Branch Office will supply full information and prices upon request.

# THE PERFECT FLOOR TREATMENT

Here is a typical account of how a floor problem was solved.

UNIVERSITY OF NOTRE DAME Notre Dame, Indiana

Continental Chemical Corporation, Watseka, Illinois.

Gentlemen:-

The Notre Dame University Library building was opened for use in 1917 without the cork carpets being given any treatment whatever. The carpets became badly stained and were very hard to keep clean.

Some time ago the carpets began to chip and we decided

Some time ago the carpets began to chip and we decided that prompt treatment was necessary for the covering if it was to be preserved. Car-Na-Var was used and highly recommended by a salesman demonstrating a machine for scrubbing and polishing floors. We purchased one half barrel of your treatment for trial and were not dissatisfied. It did all that your salesman promised it would.

We believe that this treatment will help preserve the cork coverings. The floors are much easier to keep clean and present a neat appearance. We recommend Car-Na-Var highly.

Very sincerely yours,

Paul R. Byrne, Librarian.

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Watseka

219 Scott Street

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BRANCH OFFICES AND WAREHOUSE STOCKS FROM COAST TO COAST AND IN CANADA

Chicago Seattle New York Philadelphia Oklahoma City Minneapolis Indianapolis Houston

Los Angeles Toronto Washington, D. C. Boston Detroit



THE LIGHTING SYSTEM IN PUBLIC SCHOOLS

When it is considered that at least 12 per cent of all school children have vision defects, it appears time to begin to ask the cause. Routine medical inspection and eye testing with the Snellen chart have done much to point out defects which are rapidly being corrected. Prevention is being carried into all health fields and it seems timely that we should consider the part which lighting is playing in preventing eye defects.

Miss Harriet B. Cook, assistant director of public health at Red Bank, N. J., speaking on this subject before the National Society for the Prevention of Blindness, recently pointed out that, although definite standards have been incorporated in practically all the school-building plans for schools erected since June, 1924, there are still some outstanding examples of poor lighting even in these. Commenting on this, she said in part as follows:

"The structurally approved building may continue with the original white surface on walls until such time as they are sufficiently soiled to demand a new coat of paint, when this strain upon already taxed eyes might have been avoided with the proper tint at little cost at the time of building. Seats are often arranged without noticing that those placed too near the rear allow light rays to fall upon the eyes from a left front rather than a left rear position. Yet, how few schools consider the placing of the desks in a

diagonal position. Occasionally seats have only to be turned in the opposite direction to have the light come from the left.

"Many times these same buildings have black-boards placed between the windows causing sharp light contrasts. Again adjustment is easily effected. Teachers thoughtlessly will stand where the children, giving her attention, have to face the light. Another prevalent inconsideration of lighting in reference to the little tots in the lower grades, is the placing of sand tables where children work interestedly for long periods of time facing the windows when the table might easily be changed to another position.

"In many of the older rural and city schools, adjustments are not so easy. Windows are frequently small, far apart, and on three sides of the building. Even the shades may be of a material and color which strike the fancy of some member of the board who has been given supervision of the school in his section of the township. The walls may be of a dark color, and the desks finished with a glossy varnish. With initiative and tact, even these handicaps may be overcome pending new buildings.

"Illumination may be affected from without as well as from within. In many sections of the country, one-room schools are hid among a forest of trees which makes the rooms very dark. To prevent this, the trees may be cut only 50 feet from the sides of the building containing the windows, provided the tree tops are kept trimmed to a height of 25 feet. In the more densely populated areas, it may be walls of adjoining buildings that obstruct. Many good but older schools have this problem to meet, and have painted these walls a light color, or a shade the same as that in the room requiring the illumination, thus brightening the room materially.

"Again, the smoke of industrial cities, the fog of coast cities, and the early darkness of the north, rainy and dull days, present illumination problems which require the dependence upon artificial light for remedy. Here again the lighting code has outlined the approved methods of lighting which cost very little extra at the time of building, and which may be installed in old buildings at very small cost.

"It is rare to find direct light from lighting bulbs on individual desks, or from too few lamps placed too low to afford a proper distribution of light without dark spots and shadows. The semi-indirect or indirect lighting with globes of good diffusing glass, placed low enough that all parts of the room may be adequately illuminated, are replacing the former lights. Care must be taken to see that bulbs and globes are kept clean and free from dust, and that the system insures continuity of service and steadiness of light.

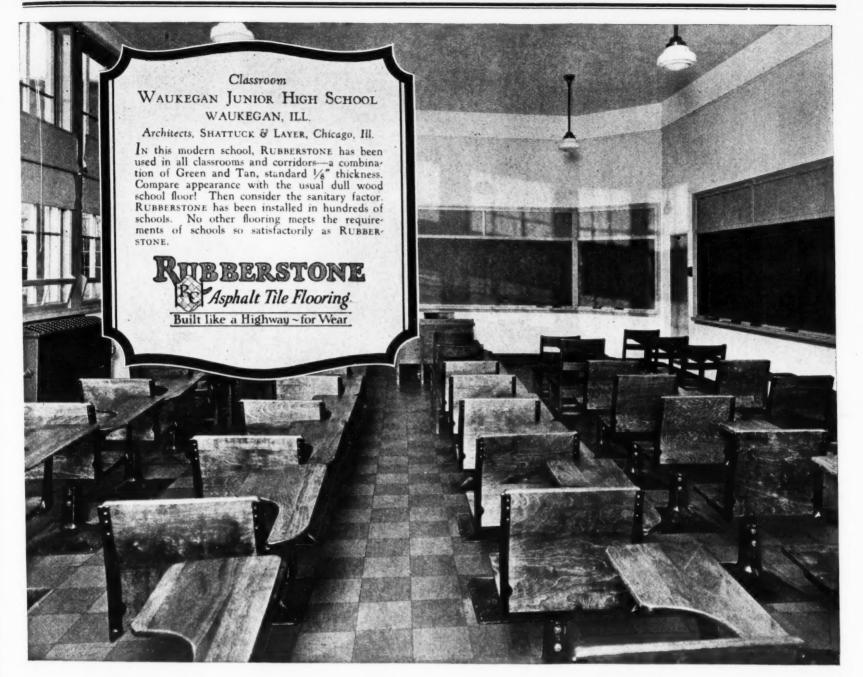
"The inexperienced but interested teacher will feel many of her problems are solved, when she understands the part proper light will play. When she can see an uninterested child become interested in proper lighting, she will find that even those of normal vision will be happier and less restless. She will be interested in having those pupils whose vision cannot be perfectly corrected, given seats nearer the board, and will see that there are frequent periods where pupils may rest their eyes a few minutes from their work.

"Even experienced and earnest teachers in schools equipped with every facility for proper distribution and diffusion of light, find they become so absorbed in their work that they do not always think to adjust the shades as the sun changes its position. In some of the higher grades they have placed the responsibility upon the monitors who are appointed weekly to aid in maintaining the regular stand of 10 foot-candle. The foot-candle is measure by a device known as the foot-candle meter, which is easily operated, tests accurately, and adds much to the interest of teachers and monitors in their work."

er eot

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ed,



## Passes Every Test in the Classroom

Flooring for the class room must wear well. It must be easy to keep clean and tidy in appearance. It must be quiet . . . warm . . . stain-proof.

RUBBERSTONE passes each of these tests with ease. It is the ideal flooring for classroom, corridor, auditorium and gymnasium.

Hundreds of RUBBERSTONE installations in schools of all grades and classes afford convincing evidence of its adaptability for YOUR school.

RUBBERSTONE CORPORATION One Madison Avenue, New York
Offices or Distributors in Principal Cities of the United States



Built like a Highway - for Wear



### Stronger, Airier, Insulated Buildings for Every School Housing Need

Circle A Schools and Gymnasiums provide attractive quarters for any size of student body - at a reasonable cost and in a very short time. For instance: 4 men erect the one-room school in five days. Other buildings "go up" correspondingly as fast. Circle A walls are insulated—four layers thick. They keep out heat, cold, and noise. Circle A Buildings are reinforced at every three feet and at all four corners. They are truly more rigid than most frame buildings. C And, last but very important—Circle A Buildings are handsome substantial structures that can stand with pride in the most expensive company. Send for interesting details. No obligation.



CIRCLE A PRODUCTS CORP. 600 S. 25th St., Newcastle, Ind.





## Portable.

#### FINANCE AND TAXATION

The school board of Boston, Mass., has approved —The school board of Boston, Mass., has approved a budget for maintenance purposes, amounting to a total of \$15,407,891. The budget allows \$17,145,314 for general school purposes, and \$1,737,422 for alteration and repair of school buildings, and for furniture, fixtures, and fire protection purposes.

—Mamaroneck, N. Y. The school board has adopted a budget for the school year 1929-30 amounting to \$599,700. A school-bond issue of \$985,000 has been voted for school-building purposes.

-Kenmore, N. Y. The voters recently approved a budget in the amount of \$1,672,869 for the school-year 1929-30.

Geneva, N. Y. An appropriation of \$199,987 was recently approved for the operation of the school system during the school year 1929-30.

Boston, Mass. The board of schoolhouse com-

school system during the school year 1929-30.

—Boston, Mass. The board of schoolhouse commissioners has asked for an appropriation of \$90,-327 to cover the cost of administration expenses for the schoolhouse department for land, plans, and construction of school buildings. The appropriation is divided between \$87,539 for administration expenses, and \$10,061 for office expenses. Similarly, an appropriation of \$124,100 was requested for the alteration and repair of school buildings. This is divided between \$96,136 for salaries, and \$27,964 for office expenses. for office expenses.

—The school board of Escambia county, Florida, on June 18, held a sale of school bonds in the amount of \$30,000, with interest at six per cent. The proceeds of the bonds will be used for building, enlarging, and improving the school buildings and grounds of the district.

and grounds of the district.

—Cleveland, Ohio. The school board has received a tentative budget amounting to \$23,229,000 for the next school year. It will be necessary to reduce the amount by \$2,300,000 if the schools are to operate within the income. The largest item in the budget is \$13,575,000 for field expenses, which includes teachers' salaries, the upkeep of playgrounds, etc. Interest on bonded indebtedness will cost \$3,230,000 this year. The estimates show an increase of \$2,800,000 over the amount required last year, but the school income is only \$500,000 more than last year. last year.

—The city council of Worcester, Mass., has authorized the board of education to construct an eight-room building at a cost of \$160,000.

—A financial chart issued by A. H. Schafer of the Racine, Wis., board of education shows that

45 per cent of the tax yield goes to the support of the schools. Out of a tax yield of \$2,358,313 the schools get \$1,071,645.

—The board of education of Kansas City, Mo., has announced that rigorous economy will have to be practiced if a deficit is to be avoided. This means that the customary advances in teachers' salaries will not be made this year. It also means that there will be an advance in nonresident tuition rates. The Kansas City Post offers the following comment: "The taxpayers will vote higher levies, when they are sure that they are necessary, for the stinting of education is not an American fault. But the taxpayers believe that there is the same reason for prudence in school expenditures that there is for other outlays, public and private. Waste is waste, no matter where it is found."

—Spokane, Wash. School Dist. No. 81 is facing a financial deficit of \$80,000 and is threatening to close the schools. Three groups of patrons have asked an injunction to prevent the school board from eleging the school

asked an injunction to prevent the school board from closing the schools.

—El Dorado, Ark. The citizens have approved an eighteen-mill school tax for school purposes.

—Fayetteville, Ark. The citizens have approved an eighteen-mill school tax.

—Fort Smith, Ark. A school tax of eighteen mills has been voted by the citizens.

—Dormont, Pa. The school board has fixed the tax levy for the fiscal year at seventeen mills on property and \$3 per capita.

—Cleveland, Ohio. Budget requests made upon Supt. R. G. Jones by the division heads of the (Continued on Page 106)

(Continued on Page 106)

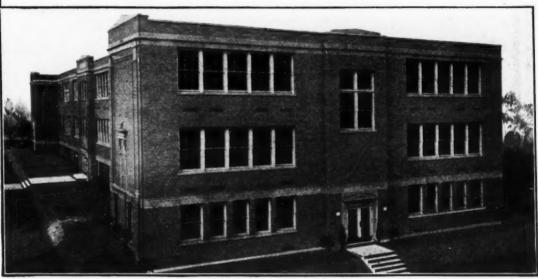


FRANKLIN STREET SCHOOL, CAPE MAY, N. J.



## "Maple...no other flooring combines so many essentials for the modern school"

R. W. Stevens, Architect, Huntington, Ind.



Central Grade School, Huntington, In-

Members of the Maple Flooring Members of the Maple Flooring Manufacturers Association have contributed many thousands of dollars and years of work to standardize and improve the manufacture and grade uniformity of Northern Maple, Beech and Birch Flooring. The following manufacturers only are licensed to use the Association Trademark MFMA. Specify MFMA on the flooring you use.

Cobb & Mitchell, Inc.
Cummer-Diggins Company
Flanner Company
Foster-Latimer Lumber Co.
Holt Hardwood Company

Cadillac, Mich.
Blackwell, Wis.
Oconto, Wis.

Holt Hardwood Company
Indiana Flooring Company
(Mill at Reed City, Mich.)
New York, N. Y.
Mitchell Brothers Company Cadillac, Mich.
Nichols & Cox Lumber Co.
Grand Rapids, Mich.
Chicago, Ill. North Branch Flooring Co.

Northwestern Cooperage & Lumber Company Gladstone, Mich. Osgood & Blodgett Mfg. Co St. Paul, Minn.

Oval Wood Dish Corporation Tupper Lake, N. Y.

Robbins Flooring Company Rhinelander, Wis Sawyer Goodman Company Marinette, Wis. Soo Lumber Company
Stephenson, I. Co. Trustees
Ward Brothers
Big Rapids, Mich. Ward Brothers

Big Rapius, Mich.

Wells, J. W. Lumber Company
Menominee, Mich.

Let our Service and Research Department assist you with your flooring problems . . . Write us. "Maple flooring has been used throughout the Central Grade School structure and the resulting finished floors have proved satisfactory in every respect.

"No other type floor combines so many of the essentials demanded in floors for the modern school. Maple Flooring is always our first choice when selecting floors for use where warmth, low maintenance cost and appearance are prime factors."

Thus Robert W. Stevens, prominent Indiana architect, reiterates the opinions of other architects and school superintendents in every section of the country.

Back of the widespread use of Northern Hard Maple in school buildings is the fact that this is the one flooring material which combines warm, dry, cushioning comfort

with the qualities of lasting wear which school use demands.

This resilient flooring material is remarkably tough-fibred and tight-grained. It will not sliver or splinter. Scuffing, youthful feet and the moving of equipment simply make it smoother with time. Northern Hard Maple, moreover, because of its permanent smoothness, is exceptionally easy to clean and keep clean. It offers no open lodging places for dust and germ-laden dirt to collect. And it permits quick, simple, permanent anchorage for seats.

Hundreds of school boards have been guided by these facts in selecting flooring. They have chosen Maple for schoolrooms, corridors, gymnasiums, assembly halls. Consult your architect about Northern Hard Maple.

MAPLE FLOORS IN COLOR-By a new special staining process-the Marietta-Murphy Finishing System-Northern Hard Maple Flooring may now be given a variety of beautiful, lasting color finishes. Standard finishes as follows:

BARLY AMERICAN

ORCHID

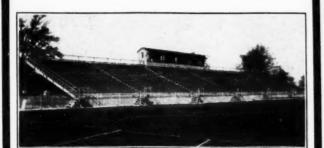
\* NATURAL

Maple Flooring Manufacturers Association 1780 McCormick Building, Chicago

The letters MFMA on Maple, Beech or Birch Flooring signify that the flooring is standardized and guaranteed by the Maple Flooring Manufacturers Association, whose members must attain and maintain the highest standards of manufacture and adhere to manufacturing and grading rules which economically conserve these ture and adhere to manufacturing and grading rules which economically conserve these remarkable woods. This trade-mark is for your protection. Look for it on the flooring you use.



## Floor with Maple



A Pittsburgh-Des Moines All Steel Grandstand Located at Oxford, Ohio.

— PROVIDING — A MAXIMUM SEATING CAPACITY

for any available area

AT A MINIMUM COST

### THE ONE SAFE, ECONOMICAL ALL-STEEL GRANDSTAND

It is not practical or good business to have school athletics with just teams. The patrons of your athletic events are the important members in building up your school reputation, and in financing your physical education program.

Do you provide comfortable, safe and up-to-date seating facilities for your friends? Then you surely cannot afford to pass up this opportunity.

The Pittsburgh-Des Moines all-steel grandstand is the one safe, economical, all-steel stand. There's a high investment value—the value is always there.

And as for cost—our deferred payment plan saves you that worry and makes it possible for the stand to earn its own cost.

Write for further information—there are no obli-

### Pittsburgh - Des Moines Steel Company

89 Neville Island, Pittsburgh, Pa.

991 Tuttle St. Des Moines, Ia.

693 Hudson Term'l Bldg. New York City

(Continued from Page 104)

(Continued from Page 104) school system have reached a total of \$23,000,000 for the school year 1929-30. These have been examined and a reduction of \$2,200,000 has been made.

—Drumright, Okla. The citizens have been asked to approve a ten-mill excess school tax levy for the school year 1929-30.

—Detroit, Mich. The school board has established a bindery for the repair of wornout text and library books. The bindery employs four men and sixteen women and will eventually be able to handle 100,000 books yearly, at a net saving of \$60,000.

sixteen women and will eventually be able to handle 100,000 books yearly, at a net saving of \$60,000.

—Berkeley, Calif. Mr. F. Linden Naylor, incumbent member of the board of education, recently defeated H. J. Haney, a candidate of the advocates of the pay-as-you-go plan for the Berkeley schools. Mr. Naylor's election will insure proponents of bonds as the most efficient method of financing school-building programs, a majority on the school bond.

-Crowley, La. The school board recently au--Crowley, La. The school board recently authorized certificates of indebtedness in the amount of \$228,800 during a term of sixteen years, for the payment of the schools' indebtedness and for the payment of salaries. On the basis of the present assessment figures and revenues needed to take up the certificates, the principal and interest will not exceed one mill during the sixteen years.

exceed one mill during the sixteen years.

—West Chester, Pa. The school board has fixed the school tax rate at sixteen mills, with a per capita tax rate of \$5.

—Portland, Oreg. The school board has asked the taxpayers to approve a special tax levy of \$1,625,000 for school operation and maintenance. Of the total levy, \$1,325,000 will be used to maintain the schools. The remaining \$300,000 will be included under a pay-as-you-go plan for the purchase of grounds and the construction of buildings, to provide for the growth of the city.

—Eldorado, Ark. The school districts of Union county have approved a tax levy of eighteen mills for school maintenance purposes.

county have approved a tax levy of eighteen mills for school maintenance purposes.

—Ionia, Mich. The budget of expenditures for the school year 1929-30 appoints to \$181,219, of which \$131,719 is to be raised by taxation. Of the total expenses, the largest item is personal service which will cost \$113,300.

—Kalamazoo, Mich. The school board has adopted a budget of \$1,742,270 for the school year 1929-30. Of the total budget, \$1,374,725 will be raised by taxation. More than \$200,000 will be

expended next year provided the \$300,000 school-bond issue is approved by the voters.

bond issue is approved by the voters.

—Easton, Pa. Mr. T. A. Mellon, treasurer of the school board, recently presented a report covering a survey of all properties on which there are delinquent taxes, to ascertain whether the properties come under the head of unseated land and are subject to lien, or whether the law can be carried out with reference to the attachment of personal goods. Following a discussion of the tax situation, it was voted to proceed with the collection of delinquent taxes on the 1926 and 1927 duplicates in strict accordance with the law and to seize personal property subject to seizure, or to place liens against the property for the collection of these delinquent taxes. A committee of four has been appointed to study the collection of taxes and to secure an opinion from the state superintendent on the laws regarding the collection of taxes. ing the collection of taxes.

-Buffalo, N. Y. The budget of the board of education for the school year 1929-30 has been reduced by \$1,180,000. To meet this radical reduction, it will be necessary for the school board to curtail a great deal of work that should of necessity be carried out. A reduction of \$259,000 was made in the maintenance items for the coming year. Among the reductions in the several departments are the follow-

ing: Curtail by 50 per cent the service of the psycho-

Curtail by 50 per cent the service of the psychological department.

Arbitrarily cut the service, equipment and supplies of the vocational schools.

Reduce by half the laboratory supplies and equipment of the high schools.

Curtail the service, supplies and equipment of the departments of music, art, physical education, manual training and homemaking.

Reduce arbitrarily all expenditures for printing

Reduce arbitrarily all expenditures for printing stationery and all other maintenance items.

An item of \$25,000 for landscape work, which has always been necessary to keep up the surroundings of our school buildings throughout the city, has been entirely eliminated. Seventy-five thousand dollars placed in the budget for improvements, such as the remodeling of toilets

(Concluded on Page 108)



The illustration above is that of a five-room huncipal'S HOME The illustration above is that of a five-room bungalow with bath which serves a home for the principal at Elm Grove, Bossier Parish, La. The house contains electrlight, natural gas, and running water, and stands in close proximity to the high school building. The school group includes not only the school building, but also teachers' cottage.

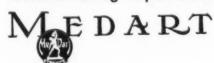


## High over the world on a modern Magic Carpet!

The Medart Playground Equipment
Catalog is sent free
on request. It shows
and describes many
different pieces and
combination of playground apparatus.

LIKE A world apart; the playground is full of adventures in Fairyland. Each different piece of apparatus is a different flight of imagination. As the swing rides high, what a transformation comes . . . on a magic carpet in the sky the journey is far and wide over the land of Never-Was.

The playground, stimulating, fascinating, is a part of the modern educational system; building strong bodies and active minds. To the continued success of the playground the Medart Organization contributes 56 years of specialized manufacturing experience.



FRED MEDART MANUFACTURING CO.
3530 DeKALB STREET • ST. LOUIS, MISSOURI

FOR 56 YEARS MAKERS OF GYMNASIUM APPARATUS AND PLAYGROUND EQUIPMENT

### You are Buying More Than Furniture



WHEN you make your selection of laboratory furniture for your school, you are buying more than furniture. You are buying the equipment upon which the usefulness of the school to the community depends. The finest school building in the world is of little value if the equipment is inadequate or inferior.

Sheldon furniture inspires pupils and teachers to do their best work. In the quality and length of service it will give, it will bring the greatest educational and financial returns from the community investment.

### E. H. SHELDON & COMPANY

Laboratory Furniture Specialists for 30 Years

MUSKEGON, MICHIGAN

(Concluded from Page 106) in the various schools and other needed improve-ments, has been entirely eliminated from this year's

Seventy-five thousand dollars which had been placed in the budget for added night-school activities in the way of adult education has been entirely eliminated. eliminated.

ities in the way of adult education has been entirely eliminated.

—A compromise in the school appropriation war between Mayor Braden and the school committee of Lowell, Mass., which has been fought since January, has been effected recently. Under the compromise, the mayor agreed to submit a supplementary appropriation bill of \$35,000 so that the schools could continue to function through the year. The \$35,000 additional is \$8,000 less than the finance committee recommended and \$50,000 less than was expended last year, but the sum met the approval of the school committee.

In January last, the mayor cut the school committee's estimate by \$112,000, to a point that was \$86,000 less than was expended in 1928. Since that time there had been frequent conferences and arguments over the school department appropriation.

—Eugene, Oreg. At the recent election, the voters were asked to approve a budget of \$162,000. A controversy had arisen over the contention that the budget is too large, and that it is \$72,000 above the six-per-cent limit. The antibudget forces were defeated at a taxpayers' meeting when it was decided to submit the unchanged budget to the taxpayers at the election.

decided to submit the unchanged budget to the tax-

decided to submit the unchanged budget to the taxpayers at the election.

—Harrisburg, Pa. The school board has retained the usual eighteen-mill tax rate and the \$2
per capita rate for 1929.

—Fort Smith, Ark. The school board has adopted
an eighteen-mill tax levy for school purposes.

—The southcentral association of Chicago has
refused to support an appeal of the board of education for an increase in the tax rate from 96
cents to \$1.47 on the ground that the tax rates of
the city are now dangerously high. The association
favors closing the schools rather than a raise in
the tax rate, and points out that financial relief
for the schools may be had through a revaluation
of the taxable properties on which the 1928 revenues will be provided.

—Indianapolis, Ind. The school board has
entered upon a program of expenditures for capital

entered upon a program of expenditures for capital improvements and loans for school expenses, which on July 1, placed the schools at a low ebb in financial resources. For expenditures since January 1 of \$1,180,000, through bond issues for building

and improving schools, the tax payers in 1930 will be assessed 1.75 cents more in taxes.

The July 1 borrowing limit of \$234,799 was reached by the authorization of bonds amounting to \$995,000, and by \$180,000 issued since January 1, and by a loan of \$800,000 to meet operating until the fall installment of taxes come

—Lowell, Mass. A curtailment of school activities has been found necessary through the acceptance by the mayor and school committee of a compromise budget reducing the appropriation to approximately \$50,000 below last year's expenditures

-Stamford, Conn. The school board has adopted a budget amounting to \$1,272,861 for the school year 1929-30.

—Boston, Mass. The total cost of the schools

year 1929-30.

—Boston, Mass. The total cost of the schools this year will be \$20,645,314, according to business manager Alexander M. Sullivan. The total cost is about \$500,000 over last year. The cost for maintenance alone, exclusive of lands, plans, and construction of buildings, as well as alterations, furniture, and fixtures, will amount to \$15,407,891. The total cost for lands, plans, and construction of school buildings for the year will cost \$3,500,000, in addition to maintenance, and alterations. 000, in addition to maintenance, and alterations, etc., will cost \$1,737,422.

The largest item in the budget in the maintenance appropriation of \$15,407,891 is for salaries of principals, teachers, and members of the supervising staff. The salary item will reach a total of \$11,859,843. Other items in the maintenance budget include \$910.277 for custodians and matrons; and the salaries of administrative officers, clerks, stenographers, and other employees which will reach a total of \$392,952.

total of \$392,952.
—Cleveland, Ohio. The school system faces a possible curtailment of some of its activities due to a serious lack of funds. Mr. G. A. Gesell, business manager of the board, pointed out that the schools will receive \$400,000 from the extra mill levy, which will be used up for automatic salary increases.

—Sioux City, Iowa. The local school system will be the heaviest loser if the local national banks win their five suits now pending in the courts. The suits have been brought by five national banks and are for the recovery of taxes to the amount of \$108,706. As the school board receives about 40 per cent of the tax affected by the cases, it would be the heaviest loser by \$50,000. —The school board of Scotia, N. Y., has adopted budget, of which \$153,932 will be raised by xation. The balance is obtained from state

Sources.

—Shreveport, La. The school board has effected a reduction in the building-fund tax rate in five school districts of Caddo parish. The reductions amount to 5½ mills. The school board has voted to expend not more than \$2,400 for equipping twelve school cafeterias with cash registers. The registers are intended to provide a written record of are intended to provide a written record of all receipts and expenditures in the cafeterias.

—Minneapolis, Minn. For the first time in years, the school board has asked for a 22-mill tax rate, the maximum under the law. An increase of \$100,000 has been made in the fund for painting, improvement, and maintenance of equipment.

provement, and maintenance of equipment.

—Chicago, Ill. The depleted condition of the school funds has resulted in drastic economies by the school board. Beginning May 15, all school playgrounds were closed because of a lack of funds for their operation. The board voted to distribute script pay to employees of the building department who have not been paid for seven weeks. Those who have been given these notes must hold them until the school board has the money to meet them.

—Boston, Mass. The school board has appropriated \$202,427 for administration expenses for the schoolhouse department for plans, construction work, and land for the year ending Dec. 31, 1929. The items include salaries for construction employees, an additional appropriation for office expenses, and traveling expenses.

—Duquesne, Pa. The school board has adopted a tax levy for 1929 of sixteen mills on property, estimated to bring \$347,717, and \$3 per capita, estimated to bring \$16,857, or a total from the levy of \$364,467.

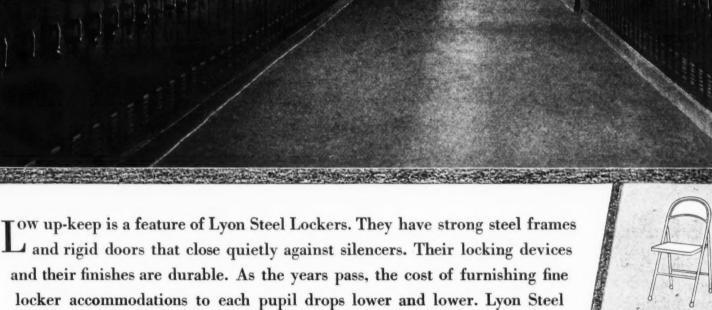
—The Illinois legislature has approved a bill providing an appropriation of \$20,000,000 for school purposes.

school purposes.

—Cleveland, Ohio. The school board has been asked to approve a preliminary budget of \$23,229,-000 presented by Mr. G. A. Gesell, clerk of the board. The largest item in the budget is \$13,575,-000 for field expenses and for automatic increases in the salary schedule. The budget includes an appropriation of \$2,921,000 for the maintenance of buildings and equipment, and \$1,933,000 for operating expenses.

## Turn to LYON for

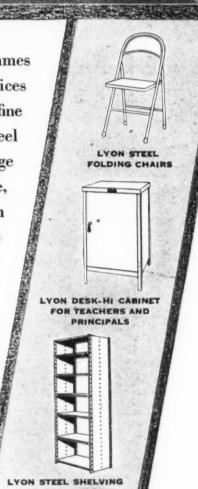
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that cost practically
nothing for up-keep



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STEEL STORAGE EQUIPMENT

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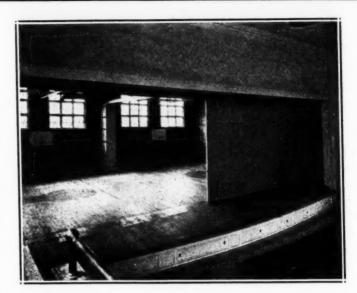
### ANCHOR POST FENCE COMPANY Eastern Ave. and Kane St., Baltimore, Md.

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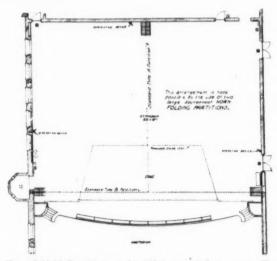




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In no other partition do you get all three of these features so perfectly combined. The partition moves out silently and easily by the simple turning of a handle or by motor power. Once closed even the loudest sounds are unheard on the other side of the partition. When open there is nothing to mar the floor or interfere with its use for any other purpose. Before you buy partitions investigate the Horn Selfold. The more you know about them the more they will appeal to you.



Horn Selfold Partitions make 100% use of floor space. The same space can be used for several different purposes, as clearly shown by this floor plan of an installation in the Parma Junior High School, Cleveland, Ohio.

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Please send information about your sound proof, silen mechanically operated folding partition.
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HERE'S the new LaFayette School, Norfolk, designed by Peebles & Ferguson. Miller School Wardrobes were specified by the architects and installed by R. R. Richardson & Co., general contractors. Thus in Norfolk, school authorities endorse the Miller—the wardrobe with the multiple operation and single control. The master door of the Miller School Wardrobe opens and closes all the doors. One lock on the master door locks or unlocks all the doors. The teacher controls the wardrobe because she holds the key to the master door. While assuring perfect ventilation for the schoolroom, the Miller Wardrobe also protects the pupils' clothing, prevents petty pilfering and supplies added blackboard space. Write for Catalog W-7.

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### K-M SUPPLY COMPANY

### The Rock Island Salary Schedule

Teachers Encouraged to Study

The school board of Rock Island, Ill., has adopted a new salary schedule, which encourages additional training on the part of teachers on the staff. The schedule is in the form of a singlesalary schedule, providing similar salaries for both the high and grade schools for the same training and experience. While the maximum salaries are relatively low at the present time, it is planned to increase them in the near future. Since the purpose of the schedule is to encourage teachers to take advanced training, it will be the policy of the school board to assign teachers to positions where their advanced training will carry an increase in salary. It is felt that if this is not done, teachers will not make the effort to take the advanced training.

Under the schedule, teachers are divided into four general classes, as follows: Class D, teachers with two years of normal-school training; Class C, teachers with three years of normalschool training; Class B, teachers with a bachelor's degree leading to graduate work; and Class A, a master's degree, Class D teachers must have completed 60, 70, or 80 semester hours of training; Class C teachers, 90, 100, or 110 semester hours of training; Class B teachers, 120, 126, 132, 138, or 144 semester hours of training, the four of which represent graduate work which must be taken in an institution with a graduate standard; Class A teachers must have completed 150 hours of training.

Under the schedule, teachers with no experience, but having 60 semester hours of training, will begin at a minimum of \$900, will advance to \$1,000 the first year, \$1,050 the second year, \$1,075 the third year, and \$1,100 the fourth year. Teachers in Class D, having 70 semester hours of training, will begin at \$950, will ad-

vance to \$1,050 the first year, \$1,100 the second year, \$1,125 the third year, \$1,150 the fourth year, and \$1,175 the fifth year.

Teachers in Class C, having 90 semester hours of training, will begin at a minimum of \$1,050, and will advance to \$1,150 the first year, \$1,250 the second year, \$1,300 the third year, \$1,325 the fourth year, \$1,340 the fifth year, \$1,350 the fifth year, and \$1,375 the sixth year. Teachers in Class C, having 100 semester hours of training, will begin at a minimum of \$1,100, and will advance to \$1,200 the first year, \$1,300 the second year, \$1,350 the third year, \$1,375 the fourth year, \$1,390 the fifth year, \$1,400 the sixth year. \$1,450 the seventh year, and \$1,500 the eighth year. Teachers in Class C, having 110 semester hours of training, will begin at a minimum of \$1,150, and will advance to \$1,250 the first year, \$1,350 the second year, \$1,400 the third year, \$1,425 the fourth year, \$1,440 the fifth year, \$1,450 the sixth year, \$1,500 the seventh year, \$1,550 the eighth year, and \$1,600 the ninth year.

Teachers in Class B, having 120 semester hours of training, will begin at a minimum of \$1,200, and will advance to \$1,350 the first year, \$1,500 the second year, \$1,600 the third year, \$1,650 the fourth year, \$1,700 the fifth year, \$1,750 the sixth year, \$1,775 the seventh year, \$1,800 the eighth year, and \$1,825 the ninth year. Teachers in Class B, having 126 semester hours of training, will begin at a minimum of \$1,250, and will advance to \$1,400 the first year, \$1,550 the second year, \$1,650 the third year, \$1,700 the fourth year, \$1,750 the fifth year, \$1,775 the sixth year, \$1,800 the seventh year, \$1,825 the eighth year, and \$1,850 the ninth year. Teachers having 132 semester hours of training, will begin at a minimum of \$1,300, and will advance to

\$1,450 the first year, \$1,600 the second year, \$1,700 the third year, \$1,750 the fourth year, \$1,800 the fifth year, \$1,825 the sixth year, \$1,850 the seventh year, \$1,875 the eighth year, and \$1,900 the ninth year. Teachers having 138 semester hours of training, will begin at a minimum of \$1,350, and will advance to \$1,500 the first year, \$1,650 the second year, \$1,750 the third year, \$1,800 the fourth year, \$1,850 the fifth year, \$1,875 the sixth year, \$1,900 the seventh year, \$1,925 the eighth year, and \$1,950 the ninth year. Teachers having 144 semester hours of training will begin at a minimum of \$1,400, and will advance to \$1,550 the first year, \$1,700 the second year, \$1,800 the third year, \$1,850 the fourth year, \$1,900 the fifth year, \$1,925 the sixth year, \$1,950 the seventh year, \$1,975 the eighth year, and \$2,000 the ninth year.

Teachers in Class B, holding a master's degree, and having 150 semester hours of training, will begin at a minimum of \$1,450, and will advance at the rate of \$50 per year up to a maximum of \$2,200 at the end of twelve years.

Under the rules, teachers who are unsuccessful will be asked to take additional educational training, without credit on the salary schedule.

Degrees will be evaluated by the superintendent for teachers coming into the school system, but a bachelor's degree will not be counted in elementary-school work, unless taken in a teachers' training institution. Work taken beyond the bachelor's degree must be approved by the superintendent of schools, if advanced standing is desired.

Teachers who fall in either Class D or C, will be given a credit rating of the column in which their 1929-30 salary appears the first time.

Teachers coming into the system will not be given an advance standing on experience in the local system. Under no case will two years of experience in other systems be counted for more than one in the local system.



## Peterson Furniture



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1200 INSTRUCTOR'S DESK.

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L-5042 MAGAZINE RACK.

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Om



When necessary to secure an experienced man to fill a position in Class B for which a man teacher is desired, the superintendent is permitted to recommend a salary of \$250 above the schedule, and in Class  $\Lambda$ , under the same conditions, a salary of \$300 per year above the

schedule. All new teachers coming into the system are required to present a doctor's certificate of good health signed by a physician designated by the

board of education. Teachers who are unable to attend to their classroom duties because of illness or death in the immediate family must notify the principal or the superintendent of such absence in order that a substitute may be employed. Full pay will be allowed for five days each year, such allowance to be accumulative to twenty days, but in case of sickness of more than five days, a doctor's certificate will be required if conditions warrant it. Pay for time lost will be deducted at the time of disability, to be paid by semesters. In case of sick leave during the first semester, five tenths of the amount will be paid at the end of the semester, and the remainder at the end of the year. Full pay will be forfeited in all cases not covered by the rules.

### TEACHERS' SALARIES

TEACHERS' SALARIES

—Postponement of final action on the regulations recently prescribed by the board of superintendents for the completion of courses affecting the annual salary increments of teachers in the New York City schools has been requested by the teachers' council. The action has been requested on the grounds that the conditions under which the courses are to be given work a hardship on the teachers, and that they divert control over teachers' services from the school system, where it rightly belongs, to the universities and colleges offering the courses. It was pointed out that if a teacher should lose the credit for having completed a course because of absence through illness, on the day of the final examination, or for some other reason, she would not only be or for some other reason, she would not only be deprived of her annual salary increment of \$125,

but she would also lose the cost of the course. Furthermore, she would have no way of making up the increment so that she would be out a total \$1,400, the loss of that annual increment during

of \$1.400, the loss of that annual increment during the life of the salary schedule.

—Ithaca, N. Y. With the adoption of a single salary schedule, the school board has revised the salaries upward. Under the plan, all teachers are paid the same salary for training and achievement, regardless of the grade, department, or subject taught. Provision is made that any teacher may increase her salary \$450 above the service maximum. Any teacher may speed up the salary schedule, that is, a teacher is rated as the pupil is rated, and those having the highest rating receive the largest annual increase in salary.

A teacher who meets the conditions may be granted a leave of absence of one-half year on full salary, or a full year on one-half salary.

salary, or a full year on one-half salary.

salary, or a full year on one-half salary.

After three years of service, a teacher who is ill may draw one half of her salary for a full school year; a teacher may draw her salary for one full month, and the board will in addition pay one half of the salary of a substitute. Teachers who are obliged to enter a hospital will receive hospital aid.

—Penns Grove, N. J. The school board has adopted a progressive policy in the matter of salary increases. More than 90 per cent of the teaching staff have signed contracts for the coming school year.

year.

—Conneaut, Ohio. All but three of the 80 school teachers on the staff have been given increases in salary by the board of education.

—Leominster, Mass. The school board has given increases of \$100 to a number of the teachers.

—Topeka, Kans. The school board has defeated a movement to increase the salaries of classroom teachers. The board will undertake a study of the salary question at a later date.

—Paris, Tenn. The school board has adopted a salary schedule, providing for average increases of \$60 per year. The new salary schedule is based on training and experience, and provides for pay at \$65 a month for teachers with no college credits, to \$120 a month for college graduates with seven years' experience. years' experience.

years experience.

—West Springfield, Mass. The school board has adopted salary increases for members of the school faculty. The increases are contingent in part on the completion of 90 hours of professional study approved by the superintendent.

Definite maximum salaries have been established Definite maximum salaries have been established for principals, supervisors, special teachers and others not belonging to a group of considerable size. The maximum salaries for women with college diploma or equivalent training in junior and senior high schools is \$2,100 and \$1,850 respectively. The maximum for women teachers with two-year normal-school training or equivalent, is \$1,850 for senior high school, \$1,700 for junior high school, and \$1,700 for elementary grades. and \$1,700 for elementary grades.

THE ENGLEWOOD SALARY SCHEDULE

The board of education of Englewood, N. J., has adopted a new salary schedule, providing for minimum salaries and annual increments up to the

maximum salaries and annual increments up to the maximum salaries.

Under the schedule, Class A teachers—kindergarten assistants, will receive a minimum of \$1,200, with annual increments of \$125, up to a maximum of \$2,400 at the end of three years. Class B 200, with annual increments of \$125, up to a maximum of \$2,400 at the end of three years. Class B teachers—grade six, will receive a minimum of \$1,300, with annual increments of \$125, up to a maximum of \$2,800 at the end of three years. Class C teachers—grades seven and eight, will receive a minimum of \$1,400, with annual increments of \$125, up to a maximum of \$3,000 at the end of three years. Class D teachers—high school, will receive a minimum salary of \$1,500, with annual increments of \$150, up to a maximum of \$3,600 at the end of three years.

Special teachers of music, drawing, physical training, and manual arts, come under the same schedule as that of the class in which the major portion of their work is done.

Under the rules governing the schedule, it is provided that credit will be given for courses approved by the committee, and only such courses as have a direct bearing on the teacher's work will be considered. Courses will be approved only when taken at a time when attendance does not interfere with the teacher's regular work, but courses on afternoons of school days may be taken in exceptional cases with the approval of the committee.

Not more than fifteen credits may be taken toward the higher maximum for work done prior to

Not more than fifteen credits may be taken to-ward the higher maximum for work done prior to September 1, 1928, and not more than six credits for work done prior to employment by the school

No teacher may advance from one maximum to another until one year has been completed at the salary of the preceding maximum. Initial salaries (Concluded on Page 114)

## LIKE adding another ROOM!

## Classroom Capacity is increased through the installation of the LAW NON-COLLIDING CHAIR

These two questions confront the great majority of school executives today:

First: How can we stretch present facilities to accommodate more students?

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Problems of classroom capacity resolve themselves into problems of seating. Obviously, the solution of such problems lies in that particular type of seating which requires a minimum of floor space.

The ordinary type of loose chair or stool is the most extravagant usurper of space. Such equipment takes up from 60 to 80% of the floor area of the average school room in that the chairs must be pushed back away from the table until sufficient space is available for arising or sitting.

The Law Non-Colliding Chair requires but a minimum of twenty-two inches in which to operate efficiently. It can be occupied or vacated by means of a ninety degree turn, the pupil arising from or occupying the chair from a side position. The minimum of space required permits of the closer spacing of tables or desks. In the average classroom this provides for the placing of an additional row of tables, an increase in pupil capacity that is worthy of careful consideration.

An exclusive feature of the Law Non-Colliding Chair is the fact that it cannot come into contact with the desk or table top, no matter in what position the chair may be. This prevents mutilation of table edges and of the chair itself. The economy in repair and maintenance expense is a feature that is too important to overlook.

Whether you are considering the purchase of new equipment, or are merely planning to replace equipment that has out-lived its usefulness, it will pay you well to investigate the many advantages of the Law Non-Colliding Chair. It is especially recommended for Biology, Chemistry, Commercial, Domestic Science, General Science and Physics Departments. Copy of our new catalog of school seating equipment, together with full particulars on the Law Non-Colliding Chair will be sent promptly and without obligation.

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With the increasing demand for the Law Chair, there is a very worth-while opportunity for the progressive school equipment dealer. We are now concluding territory arrangements with those who qualify. Full details will be sent promptly upon request.



## The B. L. Marble Chair Co. School Seating Division Bedford, Ohio



THE B. I	L. MA	RBLE	CHAIR	COMPANY
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Please send me your catalog describing the Law Non-Colliding Chair and other types of school seating.

NAME
Position
School or Address

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#### Manufacturing Facilities

THE making of dependable laboratory furniture requires not only an experienced engineering organization, skilled workmanship, and the use of good materials, but an intelligent combination of these things. In specifying Welch laboratory furniture made in Manitowoc, you are guaranteed this combination—you are assured of substantially built equipment that is long lived, even under the most severe use and treatment.

We have been manufacturing laboratory furniture for a number of years and in April, 1928, we took over the Wiese Laboratory Furniture Company of Manitowoc, Wisconsin, whose reputation for the highest quality is universally known.

#### Our Factory

OUR factory is at Manitowoc, Wisconsin. This insures excellent shipping facilities over two railways and four steamship lines. Its location, which is in the

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New West High School, Columbus, O.
McKinley High School,
Washington, D. C.
Corpus Christi High School,
Corpus Christi, Texas

heart of the woodworking districts, affords us a plentiful supply of highly skilled cabinet makers, finishers and other artisans. Our plant is arranged and equipped with the most modern machinery necessary to manufacture laboratory furniture quickly and economically. Visitors are always welcome at the factory.

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RAINED engineers and designers of many years' experience are available to contractors, architects and buyers, for consulting and advising services in reference to laboratory equipment without charge or obligation. This includes suggestive layout plans showing the

various pieces of laboratory furniture, together with the roughing-in points for all plumbing, electricity, gas, etc., as required for the various equipment specified.

Architects and buyers are relieved of all of the details incident to planning and arranging the various departments that we equip. Our planning and installation department carries work through to completion covering the actual installation and the giving of engineering service and inspection even after the work is completed.

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departments, giving in concise terms the exact construction of each piece. The many illustrations will give you a clear idea of the completed furniture.

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An inexpensive Chemistry Desk of excellent design and expert craftsmanship

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Successors to Wiese Laboratory Furniture Company
1516 Orleans Stree

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(Concluded from Page 112)

depend upon experience and training. In general, the initial salary will not exceed the present salaries of teachers already in the service, who have had equivalent experience and training. A teacher may be given a higher salary for faithful and meritorious service, upon the recommendation of the superintendent of schools and the teachers' committee of the board. All increases in salary will be given by the board of education upon the recommendation of the committee and the superintendent.

No teacher or supervisor will be considered eligible for any of the supermaximum increments unless he or she has taught at least five years in the local school system. The following qualifications are taken into consideration in making recommendations for any increment: (1) Ability to teach; (2) Ability to manage; (3) General and school interests; (4) Professional improvement; (5) Professional loyalty; (6) health (freedom from absence); (7) quality of the preparation for work. Teachers without experience are ineligible to any of the positions, except that of kindergarten assistant. A minimum of one year's successful experience is required. Teachers in the elementary and intermediate schools must have a normal-school training, and teachers in the high school must be college graduates. In the case of teachers of the special subjects, it is required that they have complete and thorough training in their special subjects in institutions of recognized standing.

### PRINCETON ADOPTS NEW SALARY SCHEDULE

The school board of Princeton, N. J., has adopted a new salary schedule, providing for classification of teachers and definite salaries for approved training in normal school or college.

Under the schedule, Class A teachers must have two years' training beyond the high school and must possess a diploma from a two-year course in a normal school. These teachers will receive a minimum salary of \$1,300, with annual increments of \$100, up to a maximum of \$2,500.

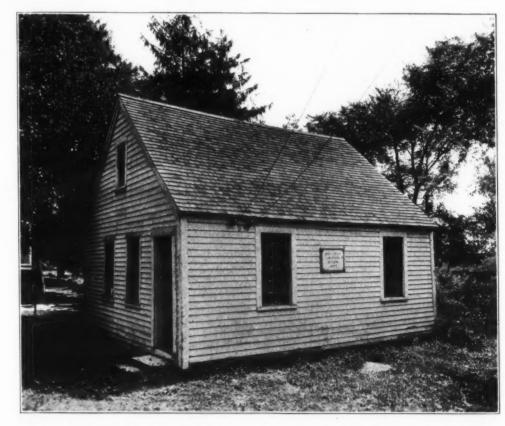
Teachers in Class B are required to have three years' preparation beyond the high school, with a diploma from a three-year course in a normal school. These teachers will be paid a minimum of

\$1,450, with annual increments of \$125, up to a maximum of \$2,825

Teachers in Class C must have four years' preparation beyond the high school, with a bachelor's degree from an approved college. These teachers will receive a minimum salary of \$1,600, with annual increments of \$150, up to a maximum of \$3,100.

Teachers in Class D consist of teachers of non-

academic subjects who are required to present special certificates issued by the State of New Jersey. These teachers will be paid a minimum salary of \$1,200, with an increment of \$100, \$125, or \$150, at the discretion of the board of education upon the recommendation of the supervising principal, approved by the teachers' committee. The maximum salary, under the rules, must not exceed that specified in Class C.



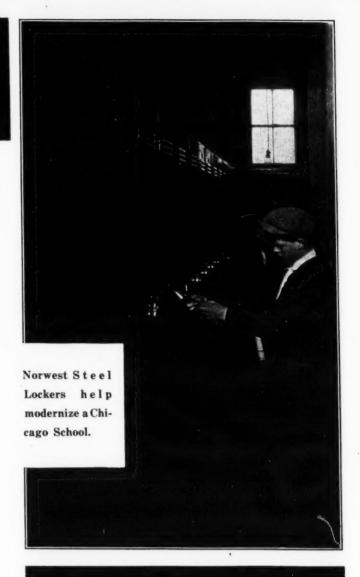
THE JUDGE REEVES LAW SCHOOL AT LITCHFIELD, MASS. BUILT IN 1784
© Publishers' Photo.

## NORWEST STEEL LOCKERS

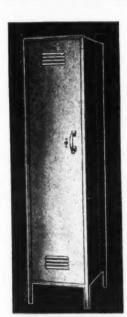
## MODERNIZE Old Buildings

MANY a structure is "old" because it lacks upto-date equipment. But replace the worn out wooden lockers and obsolete cloak racks with modern STEEL lockers—neat, sanitary, space-saving, fire-resistive, theft-preventing—and you will have taken an important first step towards rehabilitating one of these old buildings and placing it on a par with the schools of today.

This requires but a small investment. And the psychological time to do this is now.



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Single Tier Norwest Locker.

They are your best "buy," because they are honestly, ruggedly built THROUGHOUT. There are no "weak spots." Every form of use and misuse has been anticipated and provided for. All parts of our lockers which are subject to wear or strain are reinforced.

The locking mechanism is quiet—foolproof. Frames have ample rigidity. Doors—the vital part of a locker—are extra strong. An installation of NORWEST Steel Lockers, Shelving or Gym equipment, therefore, proves lastingly satisfactory, and a most economical "buy."

Ask us to tell you how an old school can be rehabilitated with modern steel equipment, also to send catalogs showing complete NORWEST line of Steel Lockers and Storage Equipment.

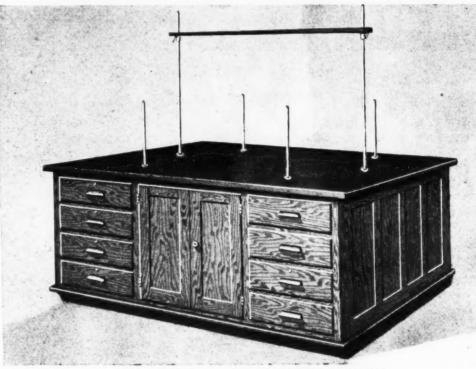


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### Laboratory and Vocational Furniture



#### PHYSICS LABORATORY TABLE

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### COURT UPHOLDS TEACHERS' PRIOR SERVICE RIGHTS

—Two important decisions affecting the pension rights of teachers have been handed down by the Supreme Court of New York in actions brought by Eleanor G. Sullivan and Louis Taylor against the teachers' retirement board.

In deciding the Sullivan suit, the Court established the rule that where a teacher holds a prior service certificate which contains errors in computation not induced by fraud on her part, the teachers' retirement board is bound by the certificate, unless its accuracy is questioned within one year from the date of issuance

In the Taylor case, it was held that welfare organizations, such as the teachers' welfare loan fund, cannot be named as beneficiaries of a teachers' retirement benefits beyond the amount to which the teacher is indebted to such organization.

In the Sullivan case, the deceased teacher had been credited with about 16 years, 3 months of service, whereas a check revealed that Miss Sullivan had slightly less than 16 years of service. In the Taylor case, action was brought by the treasurer of the teachers' welfare loan fund, to compel the retirement board to pay it \$12,355, the amount left in the will of the late Camille F. Howells. The decision was based on a statute which does not allow an unincorporated association of a charitable nature to be a residuary legatee under a will. The deceased teacher had named her estate as beneficiary of her pension benefits. She was retired in March, 1927, and a short time later asked the welfare loan fund to advance her \$100 a month for the rest of her life, or until she could be reinstated as a teacher. On the same day she drew a will naming the fund as residuary legatee. Under the arrangement, the teacher received only \$100 prior to her ment, the teacher received only \$100 prior to her death, so that if the designation had proved valid,

the welfare loan fund would have received \$12,355 for the \$100 loan. In holding that the fund could recover the \$100 actually loaned the teacher, the court declared the insurable interest of the teachers' welfare loan fund is determined by the amount of the lebt. As an unincorporated voluntary associa-tion, the teachers' welfare loan fund could not be-come a residuary legatee under the terms of the will.

### RULES GOVERNING SATISFACTORY SERVICE OF TEACHERS

SERVICE OF TEACHERS

Supt. William J. O'Shea, of New York City, has announced the approval of new regulations to govern satisfactory service of teachers and to determine the salary increments within the salary schedule after September 1, 1930.

The regulations apply to the services of teachers for each salary year after permanent appointment within the schedule, and will continue throughout the span of the schedule under which the teacher is paid. They are applicable to all regular, special, and supervisory teachers, and to teacher-clerks, junior clerks, laboratory assistants, library assistants, placement and investigation assistants, in all kinds and types of school organization.

ization.

In determining satisfactory service of teachers for the purpose of salary increments, the items of service will be considered and rated as follows:
(1) Professional Attitude; (2) Instruction; (3) Discipline; (4) Personal Attributes; (5) Routine. Professional attitude, instruction, and discipline are regarded as major considerations, as noted on the official rating blank.

the official rating blank.

No salary increment shall be given unless the teacher concerned receives a general rating satisfactory to the board of superintendents, based upon these items.

The teacher's service will not be considered as actificatory, upless and until the teacher expectage.

The teacher's service will not be considered as satisfactory, unless and until the teacher concerned presents evidence of the successful completion of a course of study of thirty hours of cultural or technical study, approved by the board of superintendents, for the salary year, or alternate service see follows: as follows:

The successful completion of an examination for a higher license, to be credited as an equivalent course of study for the two salary increments next following the completion.

2. The successful completion, within a salary

year, of a research project, undertaken at the re-

quest of the superintendent of schools, or with his approval, or under his direction, may be credited as an equivalent course of study for one salary increment.

3. The publication of a book of professional or cultural value, which may be credited as an equivalent course of study for two successive salary increments, subject to the approval of the board

of superintendents.

4. The holding of a master's degree in arts or science, from a college or university recognized by the board of regents, to be credited as an equivalent course of study for three successive incre-

ments.

5. The holding of a doctor's degree in philosophy or science from a college or university recognized by the board of regents, may be credited as an equivalent course of study for the entire span

of a salary schedule.
6. A home-study extension course equivalent to thirty hours of cultural or technical study, conducted by a college or university, and credited as an equivalent course of study for one salary increment, provided that only two home-study extension courses may be credited during the entire span of the salary schedule under which the teacher is serving

the salary schedule under which the teacher is serving.

7. The giving of a course of thirty hours in a college or university recognized by the board of regents may be credited as an equivalent course of study for one salary increment, if approved by the board of superintendents.

8. Evidence of the successful completion of a course of thirty hours as specified, may be presented by the teacher to the principal, or to a director concerned, for verification and approval when a report on approval of service for salary increase is made.

made.
Approved courses, undertaken after permanent appointment within a schedule, and successfully completed within three years immediately prior to September 1, 1930, may be credited by the board of superintendents toward satisfactory service for salary increments after September 1, 1930, on the basis of thirty hours of study for each salary increment. increment.

increment.

A course of cultural or technical study approved by the board of superintendents will be understood to mean a course conducted by a colloge or university recognized by the board of regents, or conducted by an institution or association for the pro
(Concluded on Page 118)

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#### UNIT MOVABLE DESK SET

VERY fraction of an inch of adjustability on this modern desk set is practical and usable. The range on the desk sizes is from 20 inches (which suits the very lowest grades) to 30 inches (which will accommodate adults). The adjustment range on the chair accurately corresponds to that of the desk, thus assuring maximum usability. . . . Then, too, the adjustment range on each size of the Unit Movable generously overlaps the size above or below it and, consequently, permits a leeway of one or more grades. This flexibility of adjustment makes it easy to correctly seat any pupil and permits the use of one size desk in many more grades than the average desk set. . . . Before deciding on your school seating, get all the facts on adjustment, as well as construction, adaptability, and usefulness. Ask your nearest Heywood-Wakefield sales office to explain to you in detail about the advantages of our new Unit Movable and many other modern, practical school desks

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(Continued from Page 116)

motion of literature, art, science, history, or similar purpose, chartered or registered by the board of regents, or conducted under the direction of the board of education of the city of New York, upon the recommendation of the board of superintendents.

#### TEACHERS AND ADMINISTRATION

—Evansville, Ind. The school board has completed arrangements for granting a total of \$10,000 in bonuses for travel or study to teachers dur-

ing the summer.

Under the plan, a bonus of \$100 will be given for five semester hour credits of colloge credit in a recognized college or normal school. A bonus of \$100 will be given for any one of the following

a) Attendance at all of the sessions of the annual meeting of the National Education Association

in Atlanta.

b) A visit to Monticello at Mt. Vernon, Washington, D. C., and Independence Hall in Phila-

ington, D. C., and Independence Hall in Philadelphia.

c) A week in Boston, including side trips to Concord, Lexington, and Plymouth.

A bonus of \$200 will be given for travel in Europe. All applications, up to ten in number, for the bonus will be given. On the other bonuses for travel, the applicants will be preferred who have not yet enjoyed a summer bonus. As in previous awards, length of service in the schools will be the deciding factor.

—All records of the number applying for license to teach in New York City schools were broken when 3,563 applicants presented themselves. A year ago there were 3,230 applicants and in 1927, 2,425, while in June, 1926, there were only 1,272. In spite of the fact that there is a waiting list of more than 2,000 names at the present time and another than 2,000 names at the present time and another thousand names will probably be added before the results of the examinations being given today are known, the number of applicants continues to increase steadily.

Crease steadily.

—Cedar Rapids, Iowa. The school board has amended the rules governing the employment of teachers in order to permit special salary increases for merit. The amendment provides for a salary schedule for advisory purposes only as a guide to the board in the readjustment of schedules.

Under the amendment, teachers rated as poor will not be reemployed; those rated as fair will be reemployed at no increase in salary; and those rated as good will be reemployed with increases in salary as the board may determine; teachers of exceptional ability who have pursued further training courses will be given special consideration upon recommendation of the superintendent.

—Alliance, Ohio. The school board has adopted a revised schedule of salaries, providing for an increase of \$8,000 over last year. The schedule takes the form of a sliding salary scale.

—Mobridge, S. Dak. Members of the teaching staff who wish to improve are given the opportunity to obtain a \$30 bonus for taking six semester hours of work during the summer at some reputable Under the amendment, teachers rated as poor

tunity to obtain a \$30 bonus for taking six semester hours of work during the summer at some reputable institution of higher learning. Before leaving for summer school, each teacher must make arrangements with the superintendent in regard to the work to be undertaken. A special bonus is given to each teacher who has lost no time, through illness or other reason, during the school year.

—Miss Mary P. Dunbar has retired from the faculty of the Hastings, N. Y., schools after a service of 49 years to the school system of the community. The school board in a fitting way gave public recognition of her long and faithful service.

public recognition of her long and faithful service.

public recognition of her long and faithful service.

—Miss Anna Etzensperger, 70, a veteran school teacher of Cleveland, Ohio, retired at the end of the school year after completing 51 years of service in the city schools. Miss Etzensperger retires at this time because she has reached the age limit. Miss Etzensperger was graduated from the normal school in 1878. From 1894 to 1905 she was a member of the faculty of the Cleveland Normal Training School. For the past five years she had taught in the Dunham School.

—Nepower Ill The school heard has ruled that

-Neponset, Ill. The school board has ruled that hereafter no married women will be appointed to teaching positions. Married teachers already on the staff will be retained for the next year.

—The reorganization of the state board of edu-ation of Texas, under a bill submitted by Senator Margie Neal, has been approved by the state senate. Under the Neal bill, the board will hereafter be composed of nine members, to be appointed by the governor instead of the present exofficio group of state officials. The bill intends that the board shall have the new duties of studying and recommending

financial needs of state educational institutions, of proposing new institutions, and the elimination of needless or wasteful duplication of work.

DEATH OF MR. LEE

Mr. Louis Briggs Lee, who had been active in the schoolbook business for the past 34 years, died at his home at Oak Park, Ill., on April 25.

Mr. Lee was graduated from Michigan University in 1888 and immediately entered the teaching profession. He was principal of the high schools at Flint, Mich., and Decatur, Ill. Later he entered the schoolbook business in the high-school field for the American Book Company, where he had remained for the past 34 years.

American Book Company, where he had remained for the past 34 years.

Mr. Lee was made manager of the Chicago branch of the firm in 1914, and in 1917 was elected managing director. He had held the office of vice-president since 1919.

The following paragraphs are typical of the expressions received by Mr. Lee's former associates:

"I have held Mr. Lee in the highest esteem not only because of his special business ability but also because of his very fine personal traits."

"Mr. Lee was recognized by all who knew him as a man of exceptional character and ability."

"This news brings sorrow to his multitude of

a man of exceptional character and ability."

"This news brings sorrow to his multitude of friends. I have known Mr. Lee since the early days of my work in Michigan, and have always enjoyed his friendship and appreciated his ability, professional spirit, and fine character. His death brings great loss to the profession."

"I was very fond of him personally and always greatly appreciated his professional counsel. There were few men in the educational profession with whom I had more intimate confidences."

"I shall always remember him as one of my

"I shall always remember him as one of my early advisers and most helpful friends. His advice and counsel were always most helpful."

"We have received the announcement of the death of your Mr. Lee and write to extend our sincere sympathy in the sorrow that has come to you and the loss to education."

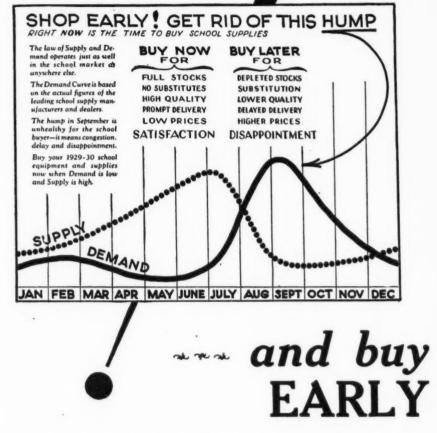
sympathy in the sorrow that has come to you and the loss to education."

"The Lindblom High School mourns with you in the loss of such a splendid administrator as Louis Briggs Lee, who recently died."

"During my pleasant association with the American Book Company Mr. Lee impressed me as being a kindly administrator. His loss will be keenly felt by the Company and by his many friends among bookmen and educators."

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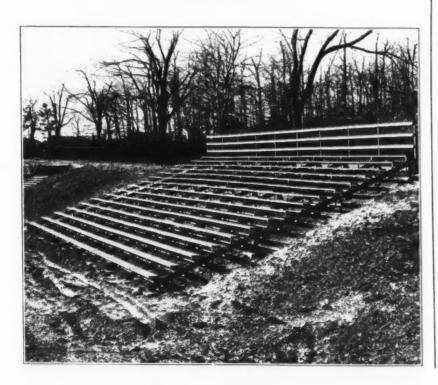
Portable — Semi-Portable — Permanent Steel Bleachers that provide safety and comfort for any number of spectators at any kind of event. The Semi-Portable and the Portable Bleachers are easily erected. They can be left up for years, or taken down from season to season.

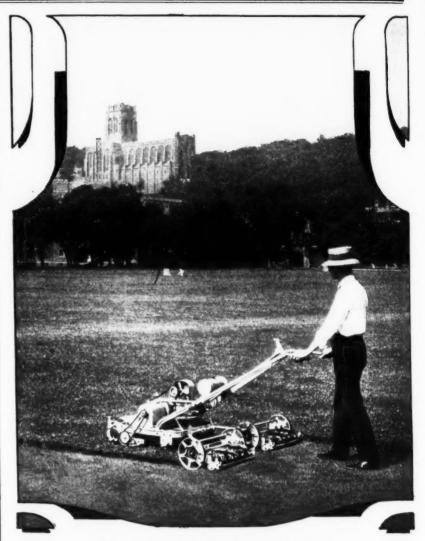
Note, from the photographs shown here, the broad wooden seats, and the footboards which extend far down enough to insure leg comfort.

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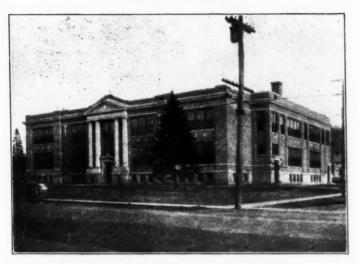
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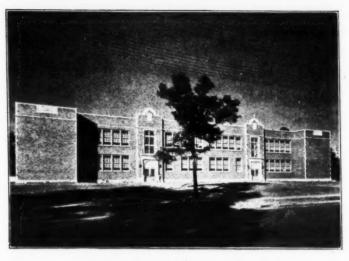
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## News for Busy Superintendents

THE TENURE OF CITY SUPERINTENDENTS OF SCHOOLS

Is there any relationship between size of city and tenure in office of the superintendent of schools? The occasional dismissal of a superintendent of schools on political or other grounds, and the frequent resignation of a superintendent to accept a position at a better salary cause this question to arise frequently.

Until recently, data relative to this point was not available. The list of members in the 1929 yearbook of the Department of Superintendence of the National Education Association includes 1,679 city superintendents of schools. Each member of the department was asked to list his college degrees and to state the year when he entered upon his present position. The great majority complied with the request, and this information relative to each member was included in the yearbook. Miss Margaret M. Alltucker, in a late issue of School and Society, writes in part as follows:

The data shows that the median length of time that 1,371 city superintendents of schools have been in their present positions is seven years, or since 1922. For cities above 5,000 in population, the median tenure of superintendents of schools in present positions is eight years, or since 1921. It was found that 1921 was the median year of entrance on present positions for superintendents of schools in cities of four population groups above 5,000. In cities of less than 5,000 population, the superintendent of schools holds his position a much shorter time. For 320 superintendents of schools in cities with a population

of 2,500 to 5,000, the median length of service in present positions is six years, or since 1923. For 209 superintendents of schools in villages of less than 2,500 population, the median length of service in present positions is five years, or since

Of the 1,371 city superintendents of schools listed as members of the Department of Superintendence and for whom year of entrance on present position is given in the 1929 yearbook, Edward C. Glass holds the record of longest service in his present position. He has been superintendent of schools of Lynchburg, Va., since 1879.

The data shows that among the superintendents of schools who have been longest in service are Mr. Lawton B. Evans of Augusta, Ga., for 47 years, or since 1882; Mr. Louis J. Rundlett, of Concord, N. H., for 44 years, or since 1885; Mr. W. H. Kirk of East Cleveland, Ohio, for 38 years, or since 1891; Mr. Samuel D. Largent, of Great Falls, Mont., for 38 years, or since 1891; and Mr. Frank L. Miller, of Harvey, Ill., for 37 years, or since 1892.

These long periods of service appear all the more remarkable when one considers that Nathan Bishop, the first full-time professional superintendent of city schools in the United States, did not begin his service in Providence, R. I., until 1839. Previous to that time others had borne the title of superintendent of schools, but they were laymen who gave only part of their time to the work, after the manner of the acting school visitors of New England.

Of 58 superintendents of schools in cities over 100,000 in population, 23, or 40 per cent, have

doctors' degrees. It is shown that in cities of over 30,000 population, superintendents of schools have much higher academic degrees than do those in the smaller cities.

Seventeen superintendents of schools in cities over 30,000 population have been honored with LL.D. degrees, and 29 have earned the Ph.D. or Ed.D., or Pd.D. degree.

Of 1,359 superintendents of schools in cities ranging in population from less than 2,500 to over 100,000, only 25, or 2 per cent, hold a normal-school diploma; the remainder are all college graduates, and 733, or 54 per cent, hold either a master's or a doctor's degree.

ADOPT SALARY RATES FOR EXECUTIVES
The school board of Pittsburgh, Pa., has adopted
a new salary schedule for the various departments
of the administration department. The salaries are as follows:

as follows:

Department of hygiene—Director (12 months),
\$9,000; assistants, \$600-\$700; medical service
supervisor, \$4,000; psychological clinic chief (12
months), \$4,800; psychological assistant, \$1,920.
Department of music—Director (10 months),
\$7,500

Department of commercial work and handwriting
—Director (10 months), \$7,000.

Department of nature study and visualization—
Director (12 months), \$6,000; clerks (10 months),

Office of Superintendent-Clerks, \$1.320; first

Office of Superintendent—Clerks, \$1,320; first associate superintendent, (12 months), \$1,680.

Superintendent of Supplies—Assistant superintendent, \$4,500; storekeeper, \$3,200; storeroom clerk, \$1,320; assistant inspector, \$200.

Secretary's Department—Accounting department, \$1,320, \$1,500, and \$2,000.

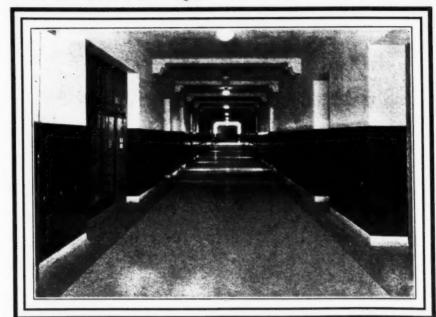
\$1,320, \$1,500, and \$2,000.

THE REASONS FOR UNEXCUSED ABSENCE
The research department of the school system at
St. Paul, Minn., has presented a report giving the
results of a study of "unexcused" absences in the
schools. The report shows that, during the school
year 1928, a total of 6,623 cases of unexcused abscences was handled by the attendance division, as
compared with 5,033 cases in 1927.

In connection with the study, an analysis of the
factors causing the absences was made. It was
found that the distribution and classification of

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cases according to cause is usually left to the individual worker, who picks the one which seems to be the most outstanding, although several factors may be present. For instance, a case may be diagnosed as due to poverty and neglect, or to truancy (which is defined as willful absence from school by the child, on his own volition), yet the two often make a vicious circle. The habitual truant seldom comes from a prosperous, well-cared-for home; when he does, he is usually the exception that proves the rule. The factor of poverty, and the neglect which often accompanies the inadequate income is an important factor in producing illegal absence, comprising about one fifth of the cases. In many cases, poverty is a relative term, that is the income is inadequate because it is poorly managed and distributed—a fact which opens up the endless possibilities of family case work by the school worker.

The department in its study, found that the num-

the school worker.

The department in its study, found that the number of children absent because of employment in industry has decreased considerably. Of the year's total, only 269 cases were directly due to the child's working for wages. This decrease has not been attributed to the child's greater love for school or to his family's unwillingness to have him earn, but to the present industrial conditions, which have lessened the demand for child labor, since there is an oversupply of unemployed on the market, with a corresponding drop in wages. The employer does not care to employ a minor with all the red tape and restrictions when there are many adequate and experienced workers to be obtained. Along with tape and restrictions when there are many adequate and experienced workers to be obtained. Along with this, the department found that there has been a growth of appreciation in the values of education; public opinion, in approving this, has undoubtedly kept many a child in school that even ten or fifteen years ago would have been a wage earner instead of a student. The supervision of child labor by the industrial commission has been credited with being responsible for discouraging and making more difficult the employment of minors. difficult the employment of minors.

The most colorful and varied cause is that of truancy, which represents 776 cases. Beneath the surface of each such case is the real underlying cause, difficult and sometimes impossible to fathom. Clash of personality between the teacher and the child is often there—the so-called and overworked inferiority complex, the adolescent urge for independence, all to be diagnosed by the psychiatrist. A change of environment, when in doubt as to the

real cause, often proves efficacious, providing as it

real cause, often proves efficacious, providing as it does the necessary shock and stimulus to the poorly adjusted mentality.

The department finds that the types of cases remain practically the same from year to year, with the number varying. Owing to differences in standards of reporting in the different schools, a classification according to numbers cannot be accurate in presenting the entire picture of non-attendance throughout the city.

### NEWS FOR SUPERINTENDENTS

NEWS FOR SUPERINTENDENTS

—Florence, Colo. During the past few years the school board has annually been flooded by applications for teaching positions. This year, upon the suggestion of Supt. D. A. Hessick, it was ordered that all applicants pass an intelligence test to determine their fitness for the positions. As a result, nearly one hundred Otis self-administering tests were given. Thirty per cent of the applicants took the test, with accepted candidates ranging in I. Q. from 109 to 128. The plan served to eliminate seventy per cent of the applicants, leaving only those who were interested and ready to comply. The plan will be continued in force next year.

—The U. S. Department of the Interior, in Circu-

The U.S. Department of the Interior, in Circular No. 11, 1929, gives the results of a study of per capita costs in teacher-training institutions during the school year 1927-28. The study shows during the school year 1927-28. The study shows that five state normals with an average enrollment of fewer than 200 students, have an average per capita cost of \$324.43 for the year for all current expenditures; 20 schools with an enrollment of between 200 and 399, have an average per capita cost of \$373.03; 13 schools of between 400 and 599 have \$265.38; 7 schools of between 600 and 799 have \$304.21; and 5 schools with an enrollment of 1,000 or more have an average per capita cost of \$246.74.

of \$246.74.

Among the state teachers' colleges, 16 schools with an average annual enrollment of fewer than 400 have an average per capita cost of \$439.67; 40 schools with an enrollment of between 400 and 799 have an average per capita cost of \$355.37; 10 schools of between 1,200 and 1,599 have \$233.51; 10 schools of between 1,600 and 1,999 have \$194.80; and 7, schools with an enrollment of 2,000 or more and 7 schools with an enrollment of 2,000 or more have an average annual per capita cost of \$263.46

for all current expenditures.

—A contract for blanket insurance for 780 members of the Syracuse, N. Y., teachers' association

has been signed and approved by the association's house of representatives

Under the terms of the contract, the insurance company will pay \$1,000 to the beneficiary of each deceased member of the association who signed for the insurance, and a monthly indemnity of \$51.04 for twenty months to members totally disabled before reaching the age of 60. There are no age limits and all teachers are insurable. No physical examination is required, provided teachers sign examination is required, provided teacher within sixty days.

—The board of examiners of the New York City school system has announced the following new rule applicable to the employment of teachers: "Women applicants for license to teach in the public schools, except kindergarten license, may be barred if they are less than four feet ten inches tall when measured in stocking feet, and men who are less than five feet tall when measured in stocking feet. Marked overweight or underweight with due regard to stature may be considered as a bar to obtaining a license."

—Lowell Mass. The measure and the warmhers of

—Lowell, Mass. The mayor and the members of the local school board have reached an agreement regarding the school appropriation controversy. Under the agreement, the mayor will ask the city council to approve an order for a supplementary convergation of \$25,000 for the school deportment. appropriation of \$35,000 for the school department. This is a little less than the finance figures which the school board had agreed to accept, and is about \$50,000 less than the expenditures of last year. At the hearings it developed that there was a difference of \$43,000 between the mayor's budget and the amount recommended by the finance commission, which the school board had agreed to accept.

—Connellsville, Pa. The school board has effected a reduction of two mills in the tax levy, making a cut of five mills in four years. The levy for next year will be 25 mills, as compared with 32 mills eight years ago.

—The school board of Enid, Okla., has approved a ten-mill tax levy for school purposes.

—Duluth, Minn. The school board has asked the city finance committee to approve the floating of a refunding bond issue of \$100,000 to pay off the school-bond issue due September 1. With the retirement of the present bond issue, a new one in a different form will be created, to make it possible to retire the bonds in regular installments.

## Savarin after Savarin installs Vulcan Equipment

as a result of satisfactory operating experience

The Savarin Restaurants are widely known for the excellence of their food and service, and the handsome appearance of their restaurants. In their kitchens will be found the most modern equipment, for they have found that such equipment is the most efficient, economical and satisfac-

The five Savarin Restaurants in New York: New York Life Insurance Building, Graybar Building, Equitable Building, Pennsylvania Station, 25 West 33rd Street, and others in Philadelphia, Baltimore and Washington,

use Vulcan "All Hot Top" Ranges, broilers, roasters, and other equipment. Vulcans are specified for all Savarins because experience has proven their low oper-

An unusual Vulcan installation in the Savarin Restaurant in the New York Life Insurance Building, New York City, which gives extreme flexibility of operation. All top cooking is done on skeleton "Hot Top" ranges, oven cooking, including roasting, in No. 3799 roasting ovens; all broiling in No. 3756 and No. 3758 Radiant Surface Broilers.

ating cost, large capacity, great flexibility, ease of operation and low upkeep cost.

A recent letter states:

"We have recently completed at the Savarin Restaurant in the New York Life Insurance Building a large installation of Vulcan All Hot Top Gas Ranges, including one of the new No. 3758 Radiant Surface Broilers. We are pleased to say that this equipment is satisfactory in every respect. We find the chefs like their operation and are able to turn out their work in a speedy manner."

Incidentally, the Savarin supervising chef uses a Smoothtop Gas Range in the Savarin Perfecting Kitchen.

When a great organization such as The Savarins, Inc. specifies Vulcan, isn't it worth *your* while to send for the Vulcan book on cooking equipment?

Hotel Department: Standard Gas Equipment Corp., 18 East 41st Street, New York.

Pacific Coast Distributor: Northwest Gas & Electric Equipment Co., Portland, San Francisco, Los Angeles.

Among thousands of users of VULCAN cooking equipment are:

Santa Monica High School, Santa Monica, Calif.

McKinley High School, Washington, D. C.

University of Delaware, Newark, Del.

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### ADRIAN SCHOOL CAFETERIA OPERATED AT A PROFIT

The school cafeteria of Adrian, Mich., is located in the old Central school building and is in the

in the old Central school building and is in the tenth year of its existence.

The annual reports of the board indicate that the cafeteria has been operated at a net profit of \$2,637.77, of which \$2,631.72 has been reinvested in equipment for the kitchen and dining-room. The total receipts for the entire period reached \$39,241.91, and the total expenditures amounted to \$46,604.14. During the entire period of nine years the receipts exceeded the total expenditures by about \$2,600.

The expenses of the cafeteria include the cost of food which is prepared and served and the salary paid to a cook employed by the cafeteria itself. The only item not included is the cost of the gas

The only item not included is the cost of the gas used in the preparation of a meal five days a week. The cafeteria has been considered a necessity because of the fact that the junior and senior high-school buildings are so crowded that it is necessary to continue the classes through the noon hour, and such a practice is impossible if the pupils are not able to keep their lunches at the school. Teachers, as well as students patronize the cafeteria, and the prices are figured at cost, plus a small margin to defray expenses.

the prices are figured at cost, plus a small margin to defray expenses.

The cafeteria has no connection with the domestic science department of the schools, except that a domestic science teacher, during some part of the morning determines the day's bill of fare and orders the food for the noon lunch.

### RULES GOVERNING JANITOR SERVICE AT MOBRIDGE, S. DAK.

The school board of Mobridge, S. Dak., has adopted rules and regulations governing the procedure for satisfactory janitor service in the schools.

The rules which are brief but inclusive, read as

Cleaning of Buildings—Wood floors should be oiled at least twice a year, preferably three times. Classrooms, corridors, and restrooms should be swept daily. Auditoriums and gymnasiums should be swept after each function requiring their use. Domestic-science rooms should be swept daily. Manual-training rooms should be swept daily, unless they are swept by pupils, when they should be swept weekly by the janitor. Janitors should be permitted by the principals to begin their classroom cleaning not later than thirty minutes after the close of the afternoon session.

Chalk trays should be cleaned daily. Blackboards Cleaning of Buildings-Wood floors should be

Chalk trays should be cleaned daily. Blackboards should be washed twice each week, and in mathematics rooms more often when necessary. All furni-

matter rooms more often when necessary. An itermiture must be dusted daily.

Windows should be washed once a year, and classrooms scrubbed once a year.

Wood and composition floors in corridors must be scrubbed once a month, and tile corridors daily. Toilets should be scrubbed daily. Fixtures should be cleaned weekly.

Care of Mechanical Apparatus—The janitor should care for all electric lights and fixtures. He should look after pumps and other mechanical devices. Classrooms and offices should be kept at an average temperature of 68 to 70 degrees from 8:30 a.m. to 5:00 p.m., and any other time the building is used for school purposes.

building is used for school purposes.

Repairs and General Upkeep of Buildings—Minor repairs not requiring skilled labor should be made as needed by the janitor. Furniture should be reset and moved as needed. Desks should be adjusted as needed. All walks and steps must be kept free from snow and ice. The janitor should have charge of and display the school flag. Major repairs as needed should be reported to the repair man and to the superintendent's office.

During the summer vacation the janitor should care for the lawn, clean the building, make repairs, and do painting, decorating, and other work on the grounds as directed by the superintendent and repair man.

grounds as directed by the superintendent and repair man.

The janitor should keep the buildings open at night as directed by the superintendent or principal. Receiving and Distributing of Supplies—Supplies should be unpacked as received. New furniture should be set up in small amounts as received. The janitor should receive other supplies when deliv-

ered at the building. All coal received should be stored under the direction of the janitor. On Saturday mornings, and at other times as necessary, the janitors should make trips to the superintendent's office to obtain supplies for their own buildings.

Assisting the Principal—The janitor should be responsible for the deportment of pupils in and around the school buildings. He should have the power to enforce all rules of deportment in the schools, or on the grounds, as directed by the superintendent and repair man.

schools, or on the grounds, as directed by the super-intendent and repair man.

The janitor should inquire from the building principal periodically whether there is any other work which they require.

The janitor, with the school principal, should prepare a schedule of work. In the summer, and during vacations, the repair man has charge of all janitors.

ADMINISTRATIVE PROBLEMS IN SMALL HIGH SCHOOL

The problem of administration as applied to the small high school is always worthy the attention of educators. Recently Fred C. Sanborn, of Halfway, Michigan, in a public address voiced some conclusions on the selection and dismissal of teacher service. The following portions prographs, are graphs.

conclusions on the selection and dismissal of teacher service. The following pertinent paragraphs are taken from his address:

"The teachers are the machinery in your school and on them depends the value of your school in the eyes of the community. There are four rules you must observe to have the best results. They are (1) select wisely; (2) direct clearly; (3) criticize justly; (4) govern severely.

"I once heard a school teacher referred to us as an iron hand in a velvet glove. This is your position. You must be friendly but not familiar. I think nothing more need be said regarding this when we look around at some of the conditions that have arisen.

have arisen.

"Let your teachers work out their own ideas. They might have some that are better than yours To do this you must give them freedom in the following ways with your approval: (1) Select their own textbooks; (2) make their own outlines and sequence of study; (3) make plans; (4) work out new methods.
"I do not believe a teacher should be allowed to

out new methods.
"I do not believe a teacher should be allowed to stay in a school system, or even in the profession, who is satisfied with any old course of study handed her, and has no ambition to improve on it or make

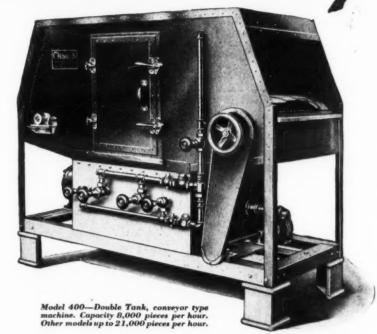
(Continued on Page 126)



## Accessibility

CHAMPION parts which require cleaning are easier to get at and remove than most similar equipment. For this reason, frequent cleaning is a more probable happening than where parts are less accessible. This is an important feature, because cleaning not only increases efficiency and speed of operation, but also promotes sanitation. Accessibility, simplicity, and substantial construction make possible the satisfactory Champion Service—that of washing dishes quickly, thoroughly and with minimum breakage.

We would welcome an opportunity of telling you how Champion Dish Washing Machines are making possible remarkable savings for prominent users everywhere. Mail coupon for illustrations and details.



## CHAMPION

DISH WASHING MACHINE CO.

HOBOKEN, NEW JERSEY

Chicago Office, 228 N. LaSalle Street

Champion Dish Washing Machine Co., Dept. 727 15th & Bloomfield Sts., Hoboken, N. J.

Please send literature describing Champion Dish Washing Machines.

Washing Machines.

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#### SPECIFICATION SANITATION FOR

## Health-Safety first!

No longer need you worry about contamination from drinking water supply-no more insanitary bubblers, no necessity for lips to touch the source of supply - thanks to Halsey Taylor Drinking Fountains.

Patented features make them health-safe-in fact that's the main reason for their almost nation-wide adoption by school-building authorities!



DENVER, Colorado, South High,

(Fisher & Fisher, Arch.)

DID YOU get your copy of our school superintendents' manual, describing and illustrating the healthsafe Halsey Taylor line?



### HALSEY TAYLOR

Drinking Jountains

The Halsey W. Taylor Co., Warren, O.

Largest Manufacturers of Drinking Fountains Exclusively



Stream is always at practical drink-ing height, lips need never touch the two-stream projector!

(Continued from Page 124)

(Continued from Page 124)
one of her own. A teacher's first duty is to work
for results and only results count. This cannot be
done by teaching from page 27 to 35 only.

"The problem of selection, rejection, dismissing,
and promoting teachers is constantly becoming
larger. It reminds me of the horse jockey who said
there were two bad things about the horse, the
first, that he was a little hard to catch when he
was turned out. Here he completed the sale and
the purchaser said, 'Oh yes, you said there were
two bad things about this horse, but you only told
me one.' The jockey replied, 'He isn't worth a hang
after you catch him.'

Why Teachers Lose Their Jobs

Why Teachers Lose Their Jobs

"While a goodly number of teachers aren't hard to catch, yet there are a good many who are worthless after catching. How are you going to remedy this? When superintendents will write recommendations for teachers that know should not have them, when we can't depend upon each other; the only thing to do is to go ahead and try. Dismiss them outright if necessary, otherwise tell them you think they'll be happier some other place, knowing all the time whose happiness your are considering.

"There are three things for which a teacher should be dismissed. They are: (1) inefficiency and no effort to change, (2) insubordination, (3) immorality.

morality.

"The next big problem is your relations with the board of education. This is one of the most serious problems in school work. It becomes a problem, because of the makeup of boards. School-board members rank all the way from illiterates to college graduates, and I guess they are as hard to get along with at one end of the line as the other. Good business men make for the best members.

School Board is Supreme

"Men, you must remember that the board of education is supreme. The board is the legislative body and its dictates must be carried out. Your office has not one legitimate leg to stand on. What authority you may enjoy is purely because of what the school board wishes to give you. If you are diplomatic, you may enjoy a great amount of authority, but don't try to run away with it. Always be sure that your board knows what is going on, especially in money matters. A board may quibble for an hour sometimes on the expenditure of a hundred dollars and vote in fifteen minutes a pro-

gram that will eventually cost thousands. Never try to dictate to the board. Lead through suggestions. Any time you see your ideas put into shape and passed as original by one of your board members, you may be happy. Give him the honor, and you take the money.

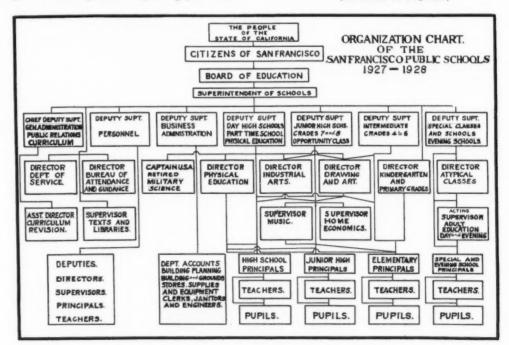
"A good many schoolmen, because of their particular ability, find themselves thrust into the political game in their communities. They secure one office after another. People begin to react in this manner. He has one public office, what does he want to do, run the whole town? At once you make political enemies, who are the worst kind. Others may forgive and forget, but political ones, never! They will follow you until eventually you will lose out. Stay out of politics and give your time to some good research problem regarding your school.

The results will be much more gratifying as well as profitable."

ADMINISTRATION NOTES

—A summer course in public administration was offered at the University of Southern California, Los Angeles, beginning June 3. The course was offered in conjunction with the school trustees' problems committee, and took up problems confronting the average layman in the performance of his duties as a school-board member.

The work was offered in five daily sessions and was attended by school trustees and administrators. Among the subjects offered were the powers, duties, and responsibilities of school-board members, the relation of the board of education to the superintendent and the staff, public relationships of the (Concluded on Page 128)



THE SAN FRANCISCO PLAN OF SCHOOL ORGANIZATION

The above chart affords a comprehensive view of the machinery devised for the administration of the school system of San Francisco. (Courtesy, Sierra Educational News.)

## Start The New Term with

Permanent Washroom Sanitation

the new
"SF"

Sanijori

"Dries Quicker Than A Towel"

Now is the time to install permanent washroom equipment and forget your towel worries forever. Sani-Dri is dependable, sanitary and efficient, saves 60% to 90% of former towel costs.

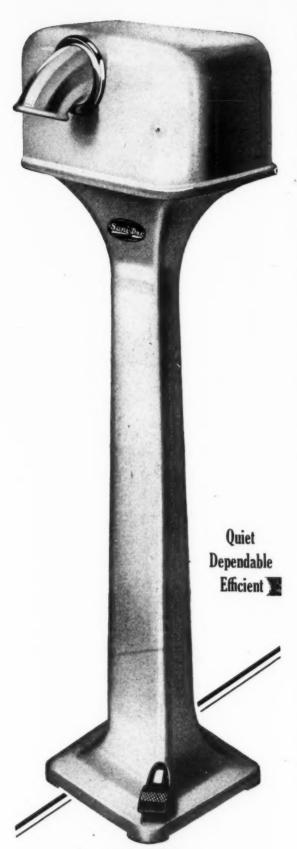
This new model Sani-Dri demonstrates its 12 outstanding improvements by delivering a faster, quieter, more thorough drying service. In fact, it sets a new standard in washroom efficiency. Its popularity and success has been displayed through the hearty welcome given it ever since its first showing at the N. E. A. Convention.

Why not start the new term with permanent washroom satisfaction? It is certain when your washrooms are Sani-Dri equipped. The 12 outstanding improvements are described in detail in a new booklet "12 Points of Perfection." It will be promptly mailed to you upon request.

Electrical Division, Dept. 7-A,

## CHICAGO HARDWARE FOUNDRY COMPANY

North Chicago, Illinois

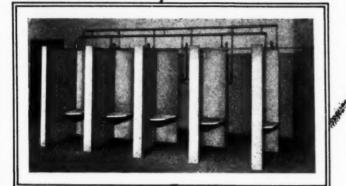


Electrical Division, Dept. 7-A,
CHICAGO HARDWARE FOUNDRY CO.,
NORTH CHICAGO, ILL.

I would like to read the new booklet, "12 Points of Perfection," describing the new "SF" Sani-Dri and its twelve improvements.

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## LBERENE STONE



Sanitation **Economy** Durability Ease of Construction

## has every Practical Advantage

The school building committee and school architect who weigh the qualifications of Alberene Stone toilet partitions, urinals and shower stalls will find definite advantages favoring this selected soapstone:

- -It can be economically fabricated with splined or tongue and groove joints;
- -No metal clips, braces, etc., are necessary; the all-stone surfaces are non-absorbent in the highest degree, assuring absolute sanitation;
- The service-lifetime of Alberene construction is greater, therefore the ultimate cost is less;
- -Minor differences in first cost are quickly equalized because there are no after-costs when Alberene is used.

Let the experience of the schools listed in our Catalog, guide you in planning for permanent satisfaction. A copy will be mailed you, gladly.

Alberene Stone Company, 153 West 23rd St., New York, N. Y.

Chicago Branch offices at—
Chicago Boston Pittsburgh
Cleveland Newark, N. J. Richmond, Va.
Washington, D. C. Philadelphia Rochester
Quarries and Mills at Schuyler, Va.

### For Toilet Partitions, Urinals, Shower Compartments

(Concluded from Page 126)

board of education, financing, sources of income, and budgetary procedure.

—Milwaukee, Wis. The board of school directors —Milwaukee, Wis. The board of school directors has adopted an amended office-salary schedule for administrative and staff officers, providing that division Q stop at classification 82—\$4,760; that divisions R and S be created, division R to begin with classification 84—\$5,000, and proceeding to 85—\$5,250, and then to 86—\$5,500. Division S will be a bonus division, with classification 87—\$5,750, and 88—\$6,000 on the recommendation of the superintendent and the approval of the board Division. Q will be designated for general assistants, division R for assistant superintendents, and division S, for

R for assistant superintendents, and division S, for the bonus division. Any assistant superintendent not now receiving the minimum salary of division R will be placed in such division at the minimum 84—\$5,000, beginning with July 1.

—Ithaca, N. Y. The board of education has adopted new rules eliminating building principals in schools with less than fifteen teachers. The entire city has been redistricted, with a group of schools under a district principal, who is responsible for the administration and supervisory activities of his particular group. The district principal is assisted by a senior teacher in each school, who teaches part time. The district principals are college-trained women, with professional training and not less than five years' experience. District principals receive a salary of \$3,200 per year.

—Principals in the schools of New York City

—Principals receive a satary of \$3,200 per year.

—Principals in the schools of New York City have made use of district-wide or school tests in testing the abilities of graduates to determine their fitness for graduation, and to find out those in need of special help. Tests have been given in four fundamental subjects which have shown the fitness of pupils for graduation.

In the case of prospective graduates, who fell below the stands, arrangements were made in the departmental program to individualize instruction, to emphasize certain subjects, or special phases of subjects which would provide the necessary remedial instruction. Moreover, the pupil was fully informed of his condition and encouraged to make every effort to improve his condition.

—At Brookville, Ind., the school board dismissed ten teachers because of the tenure law. The tenure law provides that where a teacher has served continuously in one school for five years, they are practically given a life contract, as they cannot be

certain specified charges are brought and sustained.

brought and sustained.

—A willingness to undergo hard work, a physical capacity to stand hard work, and a clear-cut purpose, were recently cited by Dr. William J. Cooper, United States Commissioner of Education, as the most outstanding characteristics in educational leadership.

leadership.

—Elimination of home work from all grades in the elementary schools of New York City in order to conserve the health of school children is advocated by Dr. Louis I. Harris, former health commissioner of that city.

"I do not believe our children have too much liberty or license. Their parents have," said Vierling Kersey, the newly appointed state superintendent of California. "That is the cause of the spectacular outbreaks among the youth of today."

—The employment of a business manager, establishment of a research and guidance bureau, timely acquisition of school sites, and inauguration of a comprehensive building program, are among the projects advanced by Frank H. Lowe, the newly elected president of the board of education of Springfield, Ill. Mr. Lowe also urged as a prerequisite to an efficient school government the support of the superintendent of schools in all approved policies.

—The Westinghouse Lamp Company at East policies.

—The Westinghouse Lamp Company at East Pittsburgh, Pa., maintains a typical schoolroom for demonstration purposes. The room has a modern general and unit ventilating system and provides accommodations for 35 students. It is equipped for the demonstration of schoolroom and blackboard lighting and heaf or filting for demonstration of schoolroom. lighting and has facilities for demonstrating arti-

lighting and has facilities for demonstrating artificial lighting.

—A series of five radio talks on the Newark, N. J., school system was broadcasted over Station WOR during the spring months. The school officials, in ten-minute talks, called attention to important phases of various activities in the schools.

—Supt. Paul C. Stetson of Dayton, Ohio, in his annual report to the school board, has recommended the adoption of a single-salary schedule, the appointment of a director of secondary education, and a reduction in the teaching staff.

—Bluffton, Ind. Beginning with next September, a new system of school government will be introduced in the high school. The plan provides for a student council system, with one representative from each sponsored room in the building, or a total of fifteen students, who will enforce the

rules and regulations. The monitor plan will be

rules and regulations. The monitor plan will be followed and the council will be permitted to appoint or elect other students to see that the rules are carried out in the halls and classrooms of the school. The veto power is held by the school faculty, this power being exercised by the principal who represents the faculty.

The administrative department at Fort Smith, Ark., recently adopted a regulation which should prove very helpful to the teachers in the selection of supplementary material for the school library. Formerly, each department, through the departmental chairman, selected a list of supplementary materials to be purchased. These lists consisted of single copies of many different books.

Under a new plan which has been placed in operation, all lists are collected, the duplications are eliminated and suggestions are offered. It has been found advisable to choose several copies of one good supplementary book, rather than to select single copies of many different books. The plan makes the supplementary material more useable from the first, and each year adds more of such usable material.

—The school board of Sioux City, Iowa, has announced the opening of the regular summer school for students of the grades, junior high, and senior high schools. Grade work will begin in the fourth grade, and junior and senior high-school work will be offered where there is a demand for it.

In the selection of students to be admitted, the principals exercise great care in order that the pupils will be definitely benefited. Students who are

principals exercise great care in order that the pupils will be definitely benefited. Students who are pupils will be definitely benefited. Students who are encouraged to go to summer school are those who are behind in their work and who can gain a half year by summer school and some additional work during the coming semester. Likewise, pupils are encouraged who are sufficiently strong, although not retarded, who can gain a half year by attendance, provided their health and general mental attitude are all right for the work. In other words, three classes of students are eligible; namely, the superstrong for acceleration; those, who for some special reason, need help in one or two subjects, but who are otherwise normal; and those in whom it is possible to simulate additional interest in schoolwork to make up time lost by illness or some form of retardation. of retardation.

Under the rules, pupils must be recommended by their grade or subject teacher and principal. No pupil is permitted to take more than two subjects, and those taking more than one subject must attend the full sessions. the full sessions.

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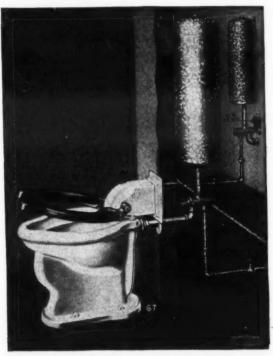
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# What Cost Summer Repairs

# If plumbing is involved, Summer Repairs cost far less than Summer Neglect. Now is the time to figure on replacing broken down, leaky, inadequate toilet fixtures with The JEWEL FLUSH VALVE

Nothing to get out of order—no treacherous needle valves, no enclosed springs. Full automatic seat action that sends a powerful, scouring flush of Water under Air Pressure to thoroughly cleanse the bowl after every use. Never a failure.

And you can actually install Bowlus Closets equipped with the famous Jewel Flush Valve for less than you can install equipment that hasn't the stamina to deliver equal service under equal conditions of school use. That's because the exclusive, patented features of Jewel design and construction eliminate complicated, troublesome valve mechanism and substitute in its place a simple plunger type of valve positively actuated by a single rod connected directly to the seat hinge. No springs are involved in the valve action in any manner. The only springs are those used to raise the seat and they are located where they should be, in the seat hinge itself. In no other installation can you obtain the simplicity, reliability and stamina of the Jewel Flush Valve with these exclusive features. No other installation can be made as cheaply—service considered.



The rear vent Jewel Unit No. 67 shown here is especially designed for Utility Room Installations. This type of installation is now specified by all farsighted architects and schoolmen and is required by law in many states.

Low in original cost, remarkably low in maintenance cost, and backed by a positive five-year guarantee which it far outlives, the Jewel is a money-saving installation.

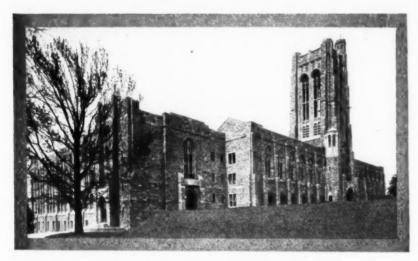
Investigate the record of Bowlus-Jewel reliability under conditions of school use. We will gladly send descriptive literature and a list of school installations and endorsements.

The BOWLUS MANUFACTURING CO.

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600-610 East Main St.

# When you buy these washable shades you buy lasting beauty— longer service



City College Building, Baltimore, Maryland. Tontine-equipped.

TODAY it's easy to save on window shade replacement costs. Tontine, the famous du Pont washable window shade, gives you an unbeatable combination of attractiveness and long life. It assures you of service for many seasons to come.

An occasional application of soap and water is all that is required to keep Tontine window shades fresh and spotless. Washing instantly restores all their original beauty—keeps them immaculate always.

Durability is built right into Tontine window shades. They are impregnated with pyroxylin, the basic substance of the famous du Pont Duco. This treatment prevents cracking, pinholing, fraying—keeps them from fading in sunlight, from spotting and staining in rain.

Investigate the Tontine story now and have better-looking, longer-lasting shades and fewer replacement costs. Mail the coupon below. And for the best window shade service have your dealer mount your Tontine window shades on the companion product—Tontine Rollers.

E. I. DU'PONT DE NEMOURS & CO., INC., NEWBURGH, N. Y. Canadian Distributor: CANADIAN FABRIKOID, Ltd., New Toronto, Ontario, Can.



### THE WASHABLE WINDOW SHADE

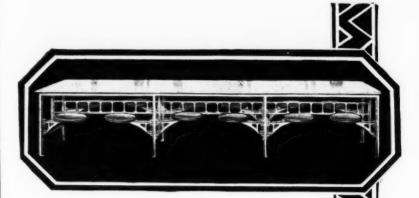


E. I. du Pont de Nemours & Co., Inc. Desk A-4, Newburgh, N. Y.

Please send me samples and full information about Tontine, the washable window shade.

Name .....

Address



HE New Sani Table No. 314 with seats attached is ideal. Note how the stools swing from the table. No chairs to move when cleaning. Everything remains neat, in its place.

Attractively finished in japan or white enamel paint with wood seats. Cast iron bases—heavy, strong and rigid, insure unlimited service. Tops are furnished in Sani Onyx, molded rubber or linoleum. Write to know more about this serviceable table No. 314.

#### SANI PRODUCTS CO.

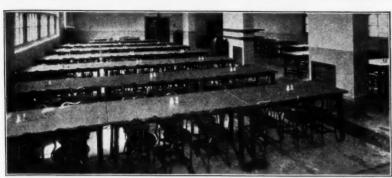
North Chicago, Illinois

Selling Organization for Chicago Hardware Foundry Co.



Complete Tood and Drink Equipment





A Typical Installation of UHL Equipment in the Dover High School, Dover Center, Ohio

### Lifetime Durability Splendid Appearance and Greatest Economy UHL STEEL Cafeteria Equipment



STURDINESS is an essential quality in cafeteria equipment—and in the UHL Line you will find this quality an outstanding feature. Cold rolled steel forms the legs and frames of both tables and chairs, and when welded and braced the UHL way, this construction defies the hardest of school service.

UHL STEEL Tables and Chairs have every requisite for comfort, cleanliness and strength. Table tops are furnished in solid oak or birch with frame work in a choice of enamel colors. Chairs, in colors to match, are roomy and comfortable without taking up much space. Beauty and utility are combined and costly replacement every few years is avoided, when you choose this UHL Furniture.

### It Pays to Buy This Better Furniture—Mail Coupon

Many schools have standardized on UHL equipment in their cafeterias, and have expressed their thorough satisfaction with its durability, appearance and economy. While its first cost may be slightly higher than ordinary wood furniture, it costs less in the long run because it will outlast it many

Mail the coupon for the UHL catalog describing this equipment and other UHL school furniture.

THE TOLEDO METAL FURNITURE CO. 3001 Hastings St. Toledo, Ohio

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-Mr. Delbert A. Hessick of Florence, Colo., has been reelected as a member of the school board. The board has been reorganized with the election of Mr. Hessick as president, Mr. V. A. Hutton as vice-president, Mr. C. G. McCandless as secretary, and Mr. F. P. Seneker as treasurer. Mr. E. E. Edwards remains as a holdover member.

—The school board of Union Free School Dist. No. 1, of Mamaroneck, N. Y., has been reorganized with the election of Mr. Joseph F. Gleason as president. Mr. Henry Siemer was reelected for a new term of three years.

-Mr. WILLIAM C. CAREY has been elected a member of the school board at Kenmore, N. Y., to succeed W. E. Elliott, who has retired. Mr. Elliott had been a member of the board for three years, and had been president during the past year.

—Mr. J. H. Rigbly, for the past fifteen years a member of the board of education at Geneva, N. Y., has refused to be a candidate for reelection this year. Mr. Henry M. Roenke has been elected a member of the board.

-Mr. John McIntosh and Mr. Ernest Webb of Auburn, N. Y., have been reelected as members of the school board for terms of five years each. Mr. McIntosh was reelected as president of the board.

—Mr. Lewis R. Barrett of Des Moines, Iowa, has been appointed director of recreation at Newark, N. J.

—DR. B. F. BAILEY has been elected president of the school board of Lincoln, Nebr., following its reorganization on May 20. Mr. Arthur Dobson and Mr. Paul F. Good are the new members of the board, who succeed Dr. E. W. Rowe and Mr. M. L. Plamer. The four members who hold over are Dr. Bailey, Mrs. Susan B. Chase, Mr. Charles BAILEY, MRS. SUSAN B. CHAS STUART, and MRS. G. H. WENTZ.

—Mr. O. B. Thorgrimson, retiring member of the school board, Seattle, Wash., was guest of honor at a banquet on May 28, which was attended by a large number of educators and prominent citizens. Mr. Charles T. Donworth was toastmaster, and Nathan Eckstein and Dr. C. W. Sharples spoke of Mr. Thorgrimson's achievements during his long period of service. Mr. Thorgrimson retired on May 29 after six years of meritorious service as a member of the board. ber of the board.

—Mr. Thomas P. Wenner, secretary of the school board of Allentown, Pa., for 29 years, has been reelected for a three-year term, with a substantial increase in salary. Mr. C. M. W. Keck, treasurer for the last thirteen years, has been reelected for the port year term. for the next year.

—Mr. Ernest Larson, formerly vice-president of the school board of Ambridge, Pa., has been elected as secretary for the next year. Mr. J. H. Elder was elected as treasurer of the board.

-Mr. R. S. Scobell has been reelected secretary of the school board of Erie, Pa., for a new term of four years, beginning with July, with a substantial increase in salary. increase in salary.

-MR. JOHN KNAPP and MR. E. C. GRISWOLD have —Mr. John Knapp and Mr. E. C. Griswold have been elected as members of the school board at Scotia, N. Y., to succeed Mr. L. F. Mulholland and Mr. R. E. Doherty, Mr. Mulholland, who was chairman of the building committee, had served two terms of three years each, and Mr. Doherty, as chairman of the teachers' committee, had almost completed his second term of three years.

—Mr. H. Wallace Caldwell has been unanimously reelected as president of the board of education of Chicago, Ill., for the coming school year. Mr. Walter H. Brandenburg was reelected as vice-president of the board.

—MR. CLIFFORD F. FREY of Bethlehem, Pa., has been reelected secretary of the school board. Mr. Earl E. Schaffer was reelected as treasurer of the

-MR. WALTER B. GOULDING has been reelected for a full term as president of the school board at Syracuse, N. Y.

—Mr. L. E. Seltzer has been elected secretary of the school board of Dist. No. 25, Elmwood, Ill. -Mr. Abraham Tobais has resigned as director

of the bureau of maintenance an school buildings at Baltimore, Md. and operation of

-Mr. John W. Lewis has been appointed as assistant superintendent of schools in charge of business affairs at Baltimore, Md.

-Mr. L. C. Stengel of Holmesville, Ohio, has een elected superintendent of schools of Springfield township.

-MR. FRED C. ENGLISH has been elected superin-

—Mr. Part C. English has been elected superintendent of schools at Calais, Me.

—Mr. S. T. Gass of Jasper, Tenn., has been elected superintendent of schools at Greeneville, to succeed A. C. Duggins.

-MR. B. E. BEARD has been reelected as head of the school system at Northwood, Iowa., for a ninth consecutive term.

—Supt. Jesse Kinner of Metamora, Ohio, has been reelected for a seventh consecutive term. -MR. E. L. PERRY of New Lexington, Ohio, has

been elected superintendent of schools at Glenford.

—Mr. N. E. Watson of Glencoe, Ill., has been elected superintendent of schools at Northbrook.

—Supt. E. O. Muncie of Madison, Ind., has been reelected for the next school year.

—Mr. W. H. PILLSBURY of Pelham, N. Y., has een elected superintendent of schools at Schenec-

-Mr. M. J. Clark of Union City, Tenn., has resigned and will continue his graduate studies at the University of California.

—Supt. L. P. Benezet of Manchester, N. H., has been reelected for a new six-year term.

-Supt. M. R. Lowe of Chancellor, S. Dak., has been reelected for another school year.

—MR. CHARLES M. SCHENCK was recently elected a member of the school board of Denver, Colo., to fill the unexpired term of B. M. Webster. Mr. C. H. Hanington, Mr. Stephen J. Knight, and Mr. L. K. Robinson were elected for terms of six years K. Robinson were elected for terms of six years each. In the election, of 118,000 persons eligible to vote, only 6,859 ballots were cast in the 98 precincts.

—MR. JOHN J. BEYERS and MR. ALEXANDER tady, to succeed A. J. Stoddard, who goes to Providence, R. I.

—MR. W. H. PILLSBURY of Pelham, N. Y., has been elected superintendent of schools at Schenec-KENNEDY have been reelected as members of the school board of Solvay, N. Y., for new terms of three years each. three years each.



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### PAYS FOR ITSELF!

The Dayton Safety Ladder soon pays for itself, because it enables the workman to use both hands freely. He works

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BUILDING NEWS

-Bangor, Mich. The taxpayers have been asked to approve a bond issue of \$85,000 for an addition to the school building.

-Springfield, Mo. The school board is consider-

—Springfield, Mo. The school board is considering sites for the location of school buildings, to be erected with the proceeds of a bond issue of \$1,500,-

O00.

—Racine, Wis. Supt. F. M. Longanecker has presented a report to the school board, covering a survey of school-building needs for the next ten years. The program takes into consideration not only the territory lying within the city limits, but also those sections which may eventually become a part of the city.

part of the city.

—Milwaukee, Wis. The school board is considering an expenditure of \$276,000 for school-building purposes. The largest of these expenditures will be \$130,000 for a two-story addition to the Keefe School.

—Moline, Ill. By a vote of 1,198 to 416, the voters of the city have approved a school-bond issue of \$470,000.

of \$470,000.

—Syracuse, N. Y. Construction of three highschool buildings, as part of the expansive school-building program, has been proposed by Supt. G. Carl Alverson. The buildings will be erected at a cost of approximately \$1,000,000.

—Birmingham, Mich. The citizens have approved a school-bond issue of \$385,000 for an addition to the Barnum School. The building will house 700 students and will be erected from plans prepared by Mr. F. D. Madison, architect, of Royal Oak, Mich.

—Detroit, Mich. The school board has adopted a school-building program providing for a proposed

expenditure of \$4,500,000 for new buildings and additions to affect nearly every section of the city. The program will provide additional housing for the schools and will afford relief for the congested sections

sections.

—Northbrook, Ill. The voters have approved a proposal to erect a gymnasium-auditorium addition to the present school.

—West Lafayette, Ind. The school board has sold a bond issue of \$125,000 to a banking concern at par, plus a premium of \$711. The proceeds of the bond issue will be used for the construction of a grade school. grade school.

—Wyoming, Ohio. The school board recently dedicated a \$400,000 school building. The school is one of the best equipped schools in the central section of the country.

-Montpelier, Va. The school board of Hanover county has completed plans for a new school, to be erected at a cost of \$40,000.

erected at a cost of \$40,000.

—Luray, Va. The citizens have approved a school-bond issue of \$150,000 for a new school. The building will be erected from plans adopted by the local board of education, in accordance with the requirements of the state board of education.

—Penns Grove, N. J. A new elementary school building has recently been occupied. The school board has carried out a program of fencing and schoolground improvement at a number of the schools. The erection of a high school has been pro-

schools. The erection of a high school has been pro-

On June 20, the school board of Hillsdale, Mich., conducted a sale of school board of Hinsdate, Mich., conducted a sale of school bonds amounting to \$285,000. The bonds cover a period of thirty years and carry an interest rate of 4\frac{3}{4} per cent, payable semiannually.

—Battle Creek, Mich. By a vote of five to one,

—Battle Creek, Mich. By a vote of five to one, the citizens recently approved a school-bond issue of \$500,000. The proceeds of the bond issue will be used for school-building purposes.

—Garden City, Kans. By a vote of two to one, the citizens approved a school-bond issue of \$50,000 for the erection of a gymnasium building. The building will be the first unit of a proposed \$300,000 structure, Messrs. Rutledge & Hurtz, of Hutchinson Kans, are the architects.

inson, Kans., are the architects.

—Clayton, Mo. The citizens have approved a school-bond issue of \$545,000 for new school build-

Mott, N. Dak. The citizens recently approved school-bond issue of \$80,000 for a new school building.

—Livingston, Mont. On July 8, the school board will conduct a sale of school-district bonds amounting to \$2,500 for the purchase of property. The bonds will be sold at par, with accrued interest, at

six per cent per annum.

—Tyler, Tex. The citizens have been asked to approve a school-bond issue of \$325,000 for school-

building purposes.
—Salina, Kans. The voters have approved a school-bond issue of \$200,000 for the erection of a twelve-room grade school and an addition to an-

twelve-room grade school and an addition to another school.

—The U. S. Bureau of Education has gathered information showing that the number of rural-school buildings for satisfying modern educational demands has increased greatly during the past decade. A report from Michigan shows that in

1915, only 22 rural-school buildings were up to the required standard in the matter of lighting, heating, ventilation, sanitation, seating, and interior arrangements. In January, 1929, there were 985 such buildings.

Reports from other states show considerable Reports from other states show considerable activity in providing the right kind of school buildings. However, in the rural sections, where the conditions are deplorable and the building inadequate, there is little or no improvement within the last fifty years. This has been found particularly true in the districts having one-teacher schools.

The Ceredo district board of education of Buf-—The Ceredo district board of education of Buffalo Creek, Wayne county, W. Va., has begun the erection of the first unit of a new school, to cost \$60,000. The building will be erected from plans prepared by Messrs. Frampton & Bowers, Huntington

ton.

—The school board of Magnolia district, Matewan, W. Va., has begun the erection of a new school. The building is being financed by a school-bond issue of \$130,000.

—The citizens of Concordia, Kans., have voted bonds in the amount of \$175,000 for a new high school.

-The citizens of Hazel Park, Mich., have voted

—The citizens of Hazel Park, Mich., have voted \$500,000 in bonds for a high school.

—The voters of Grand Ledge, Mich., have voted a bond issue of \$120,000, which added to the \$35,000 sinking fund, will provide for a high school.

—Jamestown, N. Y. The school board is receiving bids for an administration building to be completed next fall.

—Weller Tex. The school district will shortly

ing bids for an administration building to be completed next fall.

—Waller, Tex. The school district will shortly vote on a bond issue of \$40,000 for a high school.

—Wahpeton, N. Dak. The school board recently sold a bond issue of \$150,000 for the erection of a new school.

—Chireno, Tex. The citizens have approved a bond issue of \$22,500 for the erection of a school.

—Calumet, Mich. The citizens have approved a \$300,000 bond issue for the erection of a grade school, a junior high school, and a gymnasium.

—Petoskey, Mich. The school district has approved a proposition providing for the erection of a thirteen-room grade school and gymnasium.

The work will be completed at a cost of \$200,000.

—Athens, N. Y. The citizens recently defeated a bond issue of \$94,000 for the erection of a new school.

(Concluded on Page 134)

school.

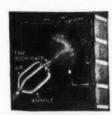




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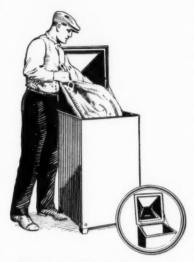
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MELROSE PARK, ILLINOIS

-Estherville, Iowa. By a vote of 446 to 143, the voters have approved a bond issue of \$160,000 for a new school.

for a new school.

—Royston, Ga. The 'citizens have approved a bond issue of \$16,000 for a new school.

—Youngstown, Ohio. Opposition to Supt. J. J. Richeson's proposal to begin a new school-building program this year has been made by Mr. Fred LaBelle, secretary of the local chamber of commerce. Mr. LaBelle has indicated his preference for a pay-as-you-go policy in school building in order to keep the tax rate at a low figure. The new building program is proposed as a remedy for the overcrowded conditions in several schools.

—Erie, Pa. During the period from 1914 to

—Erie, Pa. During the period from 1914 to 1928, the school board has carried out a large number of school-building projects. The board has expended a total of \$4,999,475 for new buildings, additions, and alterations to buildings.

During this period the board has made use of the program of the projects in formalize school buildings.

During this period the board has made use of the pay-as-you-go policy in financing school-building construction work. Practically the entire cost of new sites, grading and furniture, fixtures, and equipment for the buildings has been paid out of taxation. While the annual cost in interest and redemption of bonds has increased each year, the financial status of the school district is good. The board now has a reserve bonding power of \$948,000, and in the total amount allowed under the two per cent law, together with the additional five per per cent law, together with the additional five per cent consent of the voters, an additional bonding power of six million dollars.

power of six million dollars.

It is the belief of the school business department that the completion of the school-building program will practically cover the building needs of the schools for a period of years, and that it will not be necessary to issue a large amount of bonds. A

be necessary to issue a large amount of bonds. A few additions to elementary schools will be necessary during the next five years, but these will not require any large amounts of money.

—Princeton, N. J. The Lawrenceville School has begun an extensive building program in connection with its campaign to raise \$3,000,000. Of the total fund, \$1,130,000 will be used for new buildings and equipment for the school.

—An appropriation of \$1,000,000 has been voted.

equipment for the school.

—An appropriation of \$1,000,000 has been voted by the city council of Buffalo, N. Y., for the erection of the Burgard School, which is to replace the Elm Vocational School.

—Calumet, Mich. By a vote of five to one, the voters have approved a school-bond issue of \$300,000 for the erection of a gymnasium, junior high

and grade-school building. The building will be erected from plans prepared by Mr. John D. Chubb, architect, Chicago, Ill.

—The school board of Rogers, Ark., has author-

—The school board of Rogers, Ark., has authorized the issuance of \$60,000 in bonds for the building of an addition to the high school, and the improvement of the old building. The plans call for a gymnasium-auditorium and study hall, in addition to a number of classrooms.

—St. Louis, Mo. The board of education has approved the plans for an extensive school-building program, calling for the erection of a Central High School to cost \$1,250,000, an intermediate school to cost \$1,000,000, and units of the vocational training school to cost \$1,500,000. The new building program was adopted following a report of the special committee which recently had charge of a survey of school-building needs in St. Louis.

—San Antonio, Tex. The school board is contemplating a bond issue of \$5,000,000 for school-building purposes. The larger part of the bond issue

building purposes. The larger part of the bond issue will be used for elementary schools. Two junior high schools, and a senior high school will also be erected. The proposed building program follows a survey of school-building needs made by a committee of architects.

—Smackover, Ark. By a vote of 201 to 6, the voters have approved a bond issue of \$50,000, the proceeds of which will be used for the erection of

-Wetmore, Mo. School bonds in the amount of \$55,000 have been voted for school-building pur-

—By a majority of six to one, the citizens of Kirkwood, Mo., have approved a school-bond issue of \$250,000 for a junior high school and four primary schools.

—Galveston, Tex. A bond issue of \$2,855,000 for

—Galveston, Tex. A bond issue of \$2,855,000 for school and municipal improvements was carried by the voters at the recent school election. The school maintenance tax of 75 cents was also

approved by the voters.

—Woodward, Iowa. The citizens have approved a school-bond issue of \$25,000 for the erection of a new school. The building will provide four grade rooms and a high-school room, in addition to an assembly room. assembly room.

—The citizens of Tyndall, S. Dak., have approved

a school-bond issue of \$75,000 for school-building purposes. The proceeds of the bond issue will be used to complete a new junior high and gradeschool building.

—Liberty, Kans. The school district has approved a bond issue of \$20,000 for a new school building.

—Waco, Tex. Supt. B. B. Cobb has presented a request to the city council for \$200,000 worth of school-improvement bonds for the immediate construction of new school additions.

—North Platte, Nebr. The citizens have voted three to one, in favor of a \$480,000 school-building program, which will include the erection of a high school.

-Gobles, Mich. The school board has asked the citizens to approve a bond issue of \$50,000 for an addition to the school.

#### IMPORTANT SCHOOL BOND SALES During the Month of May, 1929

No. 1.

No. 1.

No. 1.

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MISSOURI, St. Joseph, School District...

NEW HAMPSHIRE, Claremont, School

District

NEW JERSEY, South Orange and Maplewood, School District...

NEW YORK, Binghamton, West Jr. High

School and Equipment...

NEW YORK, Elmira, Public School Building ng
NEW YORK, Hempstead & North Hempstead, Central High School District No. 1
NEW YORK, Malone, School District.....
NEW YORK, Mount Pleasant, Union Free
School District No. 9
NEW YORK, New York, School Construc-NEW YORK, New York, School Construction
NEW YORK, Potsdam, Union Free School
District No. 8.
NEW YORK, Scarsdale, Union Free School
District No. 1.
NEW YORK, Schenectady, High School....
NEW YORK, Schenectady, High School...
NEW YORK, Warwick, Union Free School
District No. 12
NORTH CAROLINA, Raleigh Twp. School
District
NORTH CAROLINA, Winston - Salem,
School
PENNSYLVANIA, Lancaster, School District PENNSYLVANIA, Philadelphia, School District
PENNSYLVANIA, Swissvale, School District
UTAH, Salt Lake City, School District...
WYOMING, Albany Co., School District
No. 1.

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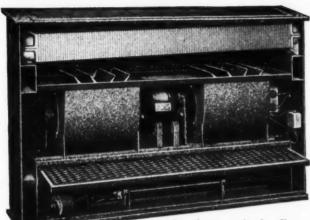
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Describing the "900" Series Unit

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## WASHINGTON

By A. C. Monahan, Formerly U. S. Bureau of Education

The National Advisory Committee on Education
An advisory committee on education appointed
by Secretary Ray Lyman Wilbur, head of the U. S.
Department of the Interior, met during the past
month in Washington, to inaugurate a study of the
relations of the National Government to education.
The committee, composed of 46 representatives of
educational institutions and organizations interest. educational institutions and organizations interested in education from every section of the country, was divided into three sections. Federal activities in

was divided into three sections. Federal activities in education will be studied by the first, Federal grants to colleges by the second, and Federal grants to schools of less than college grade by the third. Charles R. Mann, director of the American Council of Education, served as general chairman of the entire committee. J. W. Crabtree, secretary of the National Education Association, served as general

National Education Association, served as general secretary.

Evidence pertaining to the three phases of the inquiry was presented by Dr. John Cooper, U. S. Commissioner of Education to the committee at the opening session, after which the respective groups met, each to tackle its own problem. As defined by Secretary Wilbur, the aim is to return recommendations as to a future educational program by the Federal Government. He stated to the committee that he believed that through its work the proper field for the Federal service to education can be determined. He hoped for a plan which will permit the government to render through education the greatest possible service, without disturbing that local self-government which he believes fundamental to the success of the Nation.

Another problem which the committee was asked to study is that of bringing together all the educational forces in the National Government now in existence, under an assistant secretary or undersecretary of one of the departments. This would be in accord with the recommendations of the Congressional Committee on Government Reorganization, and against the National Education Association's old plan for a separate department of education with a secretary of education in the president's cabinet.

The group to consider the activities of the Fed-

group to consider the activities of the Fed-

dent's cabinet.

The group to consider the activities of the Federal Government included James E. Russell, president of the American Adult Education Association; S. P. Capen, chancellor of the University of Buffalo; W. M. Davidson, superintendent of schools, Pittsburgh; Frank P. Graves, commissioner of education for New York; J. C. Merriam, president of the Carnegie Institute of Washington; W. E. Willoughby, Institute of Government Research, Washington; George D. Strayer, head of the department of school administration, Columbia University; and the Reverend George Johnson, secretary, Catholic Bureau of Education, Washington, D. C.

The group to study subsidies to colleges included Lotus D. Coffman, president of the University of Minnesota; James R. Angell, president of Yale University; Harry W. Chase, president of the University of North Carolina; George H. Denny, president of the University of Alabama; Edward C. Elliott, president of the National Education Association; the Rt. Rev. Edward A. Pace, vice-chancellor of the Catholic University, Washington; D. W. Springer, secretary Association of Governing Boards of Universities and Allied Institutions, Washington; Mary E. Woolley, president of Mount Holyoke College; George F. Zook, president of the University of Akron, and Dr. E. P. Cubberley, of Stanford University.

The group to study subsidies for schools of less

Akron, and Dr. E. P. Cubberley, of Stanford University.

The group to study subsidies for schools of less than college grade and to make suggestions for future policy include Frank Cody, president of the Department of Superintendence of the National Education Association; J. B. Edmonson, president of the national committee on research in secondary education; Charles H. Judd, director of the school of education, University of Chicago; Mrs. F. M. N. Marrs, president of the National Congress of Parents and Teachers; A. B. Meredith, commissioner of education for Connecticut; W. F. Russell, dean of teachers college, Columbia University, and William Green, president of the American Federation of Labor.

Atlantic City and the 1930 Department of

Atlantic City and the 1930 Department of Superintendence Meeting
The principal reason for the selection of Atlantic City for the 1930 meeting of the Department of Superintendence is the fact that it has a new convention hall of unusual size and suitableness. This hall which was under construction for the past year, was dedicated on June 1 of this year. It is admirably located on the boardwalk and in the neighborhood of the largest and best known hotels.



THE NEW ATLANTIC CITY AUDITORIUM WHERE THE DEPARTMENT OF SUPERINTENDENCE WILL MEET IN 1930

The convention hall building is 350 by 650 feet in size and can seat 40,000 persons in the main auditorium. Other auditoriums and meeting rooms have a joint capacity of nearly 30,000. The large ballroom has a seating capacity of 5,000 persons. This will probably be used for the Department meetings. An exhibit hall which will be used for the educational and commercial exhibits is located on the ground floor, and contains 100,000 square feet. This will be ample space for the exhibits at this meeting and considerable more than is usually available. The building has every modern convenience for a convention.

nience for a convention.

An additional feature of Atlantic City which was considered by the executive committee, is hotel accommodations. The annual meeting of the department, and of affiliated groups meeting at the same

commodations. The annual meeting of the department, and of affiliated groups meeting at the same time, brings together approximately 15,000 persons. Atlantic City can provide rooms for these persons, perhaps more easily than any other city in the country, particularly at the time of the year when this meeting is held. Atlantic City has fourteen large hotels on the boardwalk, with a total of approximately 6,000 rooms. It has 41 other hotels, located conveniently to the boardwalk and the convention hall with approximately 3,500 rooms.

It is too early to give details of the program for this 1930 meeting. Certain features, however, are already planned by the President, Frank Cody, superintendent of schools, Detroit, Michigan. The theme of the meeting is "Education in the Spirit of Life." Mr. Cody has asked Professor Joseph E. Maddy of the University of Michigan to assemble another National High School Orchestra similar to the organization at the Dallas meeting in 1927. Mr. Maddy plans to have an orchestra of 300 of the finest high-school musicians in America and his first consideration is to have representatives from all of the 48 states Canada and the District of Columbia. the states, Canada, and the District of Columbia. Dr. Walter Damrosch has consented to lead the orchestra. The orchestra will be assembled Sunday, February 23, at Atlantic City, and will be on the program Thursday, February 28, after four and one half days of intensive training.

### Radio in Education

Radio in Education

A recent meeting called by the Secretary of the Interior, Dr. Ray Lyman Wilbur, and held in the auditorium of the Department of the Interior at Washington, discussed various phases of the use of the radio in formal education. Present at the meeting, in addition to members of the United States Bureau of Education, officials of the National Education Association, and a group of invited educators, were representatives of the principal broadcasting companies of the United States and members of the Federal Radio Commission.

In opening the meeting, Secretary Wilbur stated that in the near future it would seem that the radio must become an important factor in regular schoolwork. He said: "Practically all education is based upon an attack upon the brain through the various sense organs. The eye and the ear are the ones ordinarily used. Visual education has been largely built up around the invention of printing. The schoolroom, though, has always had a large place in it for education through the ear, auditory education. We classify some of our students as eye-minded and others as ear-minded because of their training. Through the ear are derived many of the pleasantest of all human sensations, such as those associated with music. Into this field of auditory education within the past few years there has come an entirely new force, the radio. It has given practi-

cally a continent-wide range to the human voice and to the musical instrument. It makes it possible to use the ear for enjoyment or education either in the home, the public hall, or in the schoolroom. Here, as in the beginning of other things, there is a lag where the older method holds back the installation where the older method holds back the installation of the new. It seems inevitable that great use must be found for the radio in our public educational system, The lecturer has always had a strong place. Now when it is possible for the most expert lecturers to be chosen and to have their audiences in many halls, homes, and schoolrooms, instead of in one hall, we sense the beginning of a new era.

"When with the radio can be combined the more."

"When with the radio can be combined the moving picture for demonstrations, even more uncertainty as to just what will happen in the future to tainty as to just what will happen in the future to our present methods is evident. The most searching scientific study should be made as to the best way in which the radio can find its place in education. It has been used until recently, largely for entertainment and amusement. It should pass out of the toy stage into that of community and domestic utility. The changes which it has brought about in popular elections indicates how great the changes are likely to be when it takes its full place in our educational scheme." educational scheme.

educational scheme."

The discussion of the day had to do principally with the exact uses to which the radio could be put in schoolwork, the subjects which could be broadcast, such as story-telling, the dramatization of history, geography, and pronunciation, in addition to music now already received by many schools. It also was concerned with the question of financing a program for schoolwork and under the auspices of what agency broadcasting should be given.

The practical result of the meeting was the de-

The practical result of the meeting was the decision that the president of the United States be requested to appoint a fact-finding committee to study the possibilities of radio as a medium of education. The secretary of the interior is to present this request to President Hoover.

### Oil Painting, Dr. Elmer Ellsworth Brown

Oil Painting, Dr. Elmer Ellsworth Brown
An oil painting of Dr. Elmer Ellsworth Brown,
Chancellor of the University of New York and for
seven years U. S. Commissioner of Education, was
unveiled recently in the office of the Commissioner
of Education, by the Honorable Ray L. Wilbur,
Secretary of the Interior. This painting now has its
place among the other past commissioners, portraits
of all of whom are on the walls of the room used
by the Commissioner, with the exception of that of
Dr. John J. Tigert, president of the University of
Florida who served as United States Commissioner
from June 1921, to September 1928.

#### Principal Central High School, Washington, D. C.

Principal Central High School, Washington, D. C. Harvey Arthur Smith, a graduate student of the Teachers College, Columbia University, has just been appointed principal of the Central High School of the District of Columbia, to fill the vacancy caused by the death of Alvin Miller, who died recently from blood poisoning. Mr. Miller had filled this position for the past six years.

The new principal is a native of Lancaster, Pennsylvania. He was educated in the Public Schools and Fairview Academy, Pennsylvania, and received a degree of A. B. in 1914 from Franklin and Marshall College, Lancaster, Pa. In 1921, he received the degree of M. A. from the University of Pennsylvania. He is just completing his work for a doctor's degree in Teachers' College, Columbia University, New York City.

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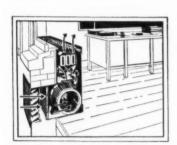
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classrooms ... without drafts !

AIR is plentiful but not always pure. Raw, outdoor air can be let into a classroom without much trouble. But the quantity of air and the ease of obtaining it is no more important than the quality, temperature and control of it! Drafts are as dangerous as measles!

A Sturtevant Unit Heater-Ventilator in each classroom will bring outdoor air indoors, filter it clean; warm it to precisely the right temperature; supply it in the right quantity ... without a hint of draft ... noiselessly!

Actual photographs of Unit Heater-Ventilator installations in schools, old and new, are found in our new U.V. Catalog number 361. It will be a pleasure to send you a copy on request-no obligation of course!

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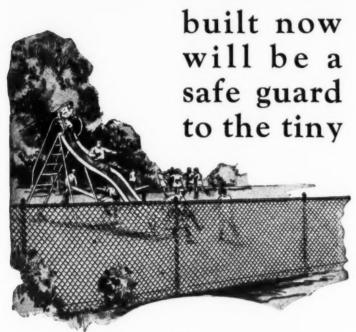
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## the Silent Unit Heater-Ventilator

SUPPLIES OUTDOOR AIR OF FILTERED CLEAN OF AND TEMPERED

## Stewart



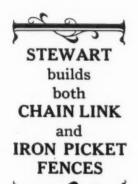
"first graders" in September

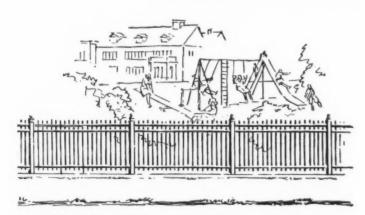
Look at the automobile advertising—75, 85, 115 milesan-hour. After accidents happen it's too late to realize that speeders can't see or read "School" signs when going fast.

Build NOW and be as safe as you can. We'll be glad to give you a preliminary estimate to have something definite to discuss with your board.

Or we'll gladly send you the new Stewart School Fence Catalog.

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"The World's Greatest Fence Builders"



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Toronto, Canada, is equipped with Hartshorn Shade Rollers

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That guests may find their window shades always responsive to the hand on the shade cord, the Company has installed Hartshorn Shade Rollers at every window—rust-proof, noiseless, smooth-running rollers with nearly seventy years of manufacturing experience behind them. Hartshorn Shade Rollers have all the new improvements, but the same dependable QUALITY of years ago. When you equip windows, ask for Hartshorn Shade Rollers.

STEWART HARTSHORN COMPANY 250 Fifth Avenue, New York City



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Although built for permanent use, Togan construction permits quick erection so as to provide almost immediate relief from overcrowded classrooms.

In design, construction and service they are equal to the finest that money can buy. They serve the need adequately and economically as long as the need exists.

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## Let Togan **Assume the Burden**

COGAN will gladly assume I the burden of solving the school problem in your community. In reality it becomes no problem at all when Togan takes the job. Togan one, two, three and four room schools meet all school requirements adequately and economically. In appearance they are a credit to any community. Togan schools are built to conform to strictest state building laws.

CHICAGO CORRESPONDENCE
Along about 1925, thirty-two concrete elementaryschool buildings were erected in Chicago. They were
"typical" buildings, all on the same plan, the same
pupil-capacity (about 900), and each cost approximately \$500,000. The need of congestion relief in
the schools was great, and quite a record for quick
construction was made. These buildings were un-

mately \$500,000. The need of congestion relief in the schools was great, and quite a record for quick construction was made. These buildings were unusual for Chicago in two chief respects: (1) They were of different design (two-story buildings instead of the usual three-stories; some of them had ornamental mansard roofs); (2) They were concrete buildings instead of the steel construction in use before and since that period.

Shortly after the construction of these thirty-two school buildings ugly rumors appeared from time to time to the effect that they were improperly put up, or were dangerous, or were "falling apart." Such charges were made during the last mayorality campaign and consequently were discounted as political. There was enough substance to them, however, so that the school board employed investigators to study some of the buildings. As far back as June, 1927, a report was made by the investigators as follows:

"Our conclusions, based upon the analysis of design and the thorough investigation of these nine buildings are substantially as contained in our preliminary report; that is, that the design of the trusses supporting this mansard roof construction is not ideal, and we would not recommend the continuance of its use. If it is used on future construction, we recommend a decided change in the connections and that the plans and specifications be clear, concise, and definite as to the amount of reinforcing rods, their area of embedment (so as to obtain required bond stress). If it is desired to continue the use of the lower cord of the type shown in this B-1 design, we recommend that it be supported to continue the use of the lower cord of the type shown in this B-1 design, we recommend that "it is important and absolutely necessary to take immediate measures to strengthen and reinforce certain structural members in roof construction of the hail in the center by some kind of kingpost attached to the appex of the trusses."

and absolutely necessary to take immediate measures to strengthen and reinforce certain structural members in roof construction of the buildings re-

members in roof construction of the buildings referred to in the engineers' report."

The school board is said to have appealed to the Western Society of Engineers to nominate reputable engineers to study these buildings. Three engineering firms were employed as a result of the recommendations of that society. These firms assigned men to study the buildings, to make careful inspections, measure, date, and to plaster up cracks and return periodically to see if the cracks were widening, and so forth. These engineers confined their work to thirteen of the thirty-two buildings.

ER

Finally, on May 8, 1929, after independent inspections had arrived at identical conclusions, the three engineers signed each other's reports and refused to be responsible if two of the buildings were kept open any longer, even until the sum-mer vacation, seven weeks later.

The new school-board architect, appointed last

fall, was worried. He hurriedly made a personal verification of the engineers' report and laid the facts before the president of the board of education, who immediately ordered the two buildings closed, turning the matter over to the state's attorney to determine whether any criminal responsibility is involved in the situation.

determine whether any criminal responsibility is involved in the situation.

The children were out of school only one day. The pupils of the Peck school (the Peck and the Hale were the two ill-fated schools) were transferred en masse to a neighboring school, the Tonti. The Tonti pupils were put on half-day session, from 8:15 a.m. to 12:15 p.m.; the Peck pupils and teaching staff held forth in the Tonti school building from 12:20 p.m. to 4:45 p.m. Fortunately, the two schools were so close together, walking distances were not prohibitive. In the case of the Hale school, the task was not so easy, as this school is located

schools were so close together, walking distances were not prohibitive. In the case of the Hale school, the task was not so easy, as this school is located far from any other, on a corner of the 640-acre school fund land, most of which has been leased to the city of Chicago for the municipal airport. Huge busses loaned from the Christopher School for Crippled Children transported the Hale pupils to the Pasteur, the Marquette, and the O'Toole for the remainder of the semester.

As soon as the pupils were out, the buildings were closed and preparation for standardized tests were started. These tests were to determine whether the buildings were safe, whether parts or all of the buildings would have to be torn down and rebuilt, or whether it would be possible to make satisfactory repairs. It might be added that these buildings had previously been repaired, particularly the roofs, following the earlier reports of trouble.

The parents of the pupils were disconcerted at the sudden and unexpected action. The buildings which were less than four years old, are fine looking in appearance. To the layman, nothing seems to be wrong with them. The Hale school folks called an "indignation" meeting. This district is in a remote part of the city outskirts, where the residents have gone through a long period of meager school facilities, long traveling distances, portables and what not. After finally getting a new school, it was suddenly snatched from them. They were

highly suspicious. At the mass-meeting they in-timated that other reasons than the safety of the building might have operated to close their school. They named such things as: (1) Politics. (2) A possible controversy between concrete and steel interests. (3) The city wants most of the 640-acre tract for a permanent municipal airport and a bill was pending (since passed) in the legislature to permit the school board to trade this tract for a city-owned beach along the lake on the north side. It was said that airplane pilots fear the tall stack of the Hale school building.

of the Hale school building.

One of the three engineers was present at the "Indignation" meeting with a series of photographs transferred to lantern slides. He showed pictures of the defects and explained them to the audience. Practically every form of defect possible was shown on the screen—in roofs, supporting walls, foundation, etc. Concrete beams were "honeycombed" and rods were exposed and rusted. Rods were many times embedded too high in the beams to afford any strength. As many as five one-inch rods had been placed in one six-inch beam, and consequently had burst the concrete. It was pointed out that in all burst the concrete. It was pointed out that in all probability other beams were without any rods. In some places there had been no excavation where it was required. In others the excavation had not been filled in where required. Masonry work was faulty.

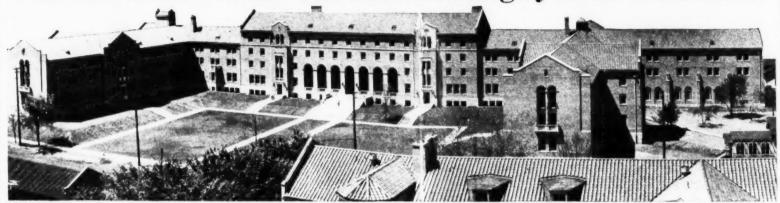
The engineer stated that, in his opinion, sand used in the concrete had been taken from the excavation. It was full of dirt, clay and even weeds. It was too fine, and consequently required too large an amount of cement, which in turn meant too much shrinkage, resulting in breakage of the concrete. Photographs of chunks of concrete revealed fossilized ice crystals and weeds.

In some places large areas of the roof hed not

In some places large areas of the roof had not been finished with tar paper and graveling, leaving the felt exposed. This permitted the roof to leak water down on to the honeycombed beams with their rods exposed. The rods would rust, and then expand, cracking the beams. A vicious circle of poor construction!

The engineer showed pictures of other concrete The engineer showed pictures of other concrete buildings, 22 stories high and as well-built as any buildings could be. The question was not whether the material was concrete or steel, but whether the buildings had been properly constructed. The engineer characterized the trouble as "criminal ignorance" in building construction, supplemented by lax or ignorant building inspection.

## At the College of St. Teresa eating System is installed



## thereby assuring complete heating satisfaction

## Look for the name DUNHAM



The Dunham Differential Vacuum Heating System and individual parts of the apparatus used in that system are fully protected by United States Patents Nos. 1,644,114 and 1,706,401 and Canadian Patents Nos. 282,193, 282,194 and 282,195. Additional patents in the United States, Canada and foreign countries now pending.

THIS beautiful new building at the College of St. Teresa, Winona, Minn., is one of the outstanding buildings of its kind in America. A Dunham Differential Vacuum Heating System was specified by Albert Buenger, Consulting Engineer, because of the satisfactory heating results obtained from operation of this system in the Nurses' Home, St. Mary's Hospital, Rochester. There is a total of over 30,000 square feet of direct radiation. The system is up-feed, steam being supplied from a central plant. The building itself consists of a four-story main section and two three-story wings. The heating system is divided into three zones so that steam is supplied to each of the three sections as required. Three Dunham Differential Pumps are installed in the central plant, one for each zone. Clarence H. Johnson of St. Paul, Minn., is the architect, Rochester Plumbing and Heating Company, Rochester, Minn., the heating contractor, and Heffron & Fitzgerald, Rochester, the general contractor.

## C. A. DUNHAM CO. Dunham Building, 450 East Ohio Street, Chicago

Over eighty sales offices in the United States, Canada and the United Kingdom bring Dunham Heating Service as close to you as your telephone. Consult your telephone directory for the address of our office in your city.

An engineer will counsel with you on any project.

It may be difficult to place final responsibility in It may be difficult to place final responsibility in the matter. The two-year period under the statute of limitations is said to have expired. The contractors can point to the fact that the city and school-board inspectors O.K.'d the jobs at their conclusion. The inspectors and architects then in charge are gone, and within the past year and a half, a new administration has come upon the scene. There is a new school-board president, a new superintendent of school a new school architect and a new buildof school, a new school architect, and a new build-ing commissioner for the city.

Meanwhile the tests have been going forward on the Peck school. The tests consist of bags of sand placed on floors, roofs, etc., according to specified standards of weight,, the formula being: twice the live load plus the dead weight. Deflectometers measure the sag and the recovery after load is removed. There are said to be engineering norms which make these tests highly objective and interpretable. Newspaper pictures and stories report that the reports of the three engineers have been confirmed by the tests, and that the tests had to be halted on the Peck school for fear the building might collapse. It is uncertain how much of the building can be salvaged by repairs and how much will have to be rebuilt. be rebuilt

Meanwhile, the school board is having engineers inspect and study the rest of the 32 buildings.

John Howatt, chief engineer of the board of education, has recently prepared a five-year report on glass breakage in Chicago public-school buildings.

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1924					\$ 71,948
1925					86,000
1926					110,246
1927					144.340
1928					158,185

Five-year total.....

The Chicago newspapers believe this is chargeable to the "play ball" spirit of youth living in restricted confines. Perhaps the sociologists can tell us what percentage is due to accidents of play, and what percentage is due to intentional mischief. How much of the latter is remedial through character education in the schools?

Up until two years ago, extra teachers in the offices of the school principals were Normal College graduates (or equivalent) and were on the teacher-salary schedule. A supreme court decision regard-ing the position of school fireman-janitor was interpreted by the school board attorney so as to compel

the placement of the extra-teacher position under the placement of the extra-teacher position under civil service. The extra-teachers were removed and teacher-clerks supplanted them. The teacher-clerks were classified as temporary 60-day appointees until the Civil Service Commission offered examinations.

There was considerable dissatisfaction throughout. The examinations were delayed. A surplus of Normal College graduates has accumulated more than could be absorbed readily into regular teaching positions. It was alleged that teacher-clerks regular their armeintments and maintained their ing positions. It was an eged that teacher-cierks received their appointments and maintained their jobs only by virtue of the sponsorship of war committeemen. The school principals were opposed to the new plan, and, at a Chicago Principals' Club party held recently, there was a "take-off" on "Cilly Sorvice" Cilly Service."

On June 8, the Civil Service Commission held the on June 8, the CVII Service Commission held the long-awaited examinations. Two thousand girls are said to have taken them. (There are approximately 400 positions paying about \$150 per month.) In spite of the formal request of the board of education that graduation from Chicago Normal College be made a prerequisite for the examinations, this was not done was not done

In the meantime, one of the school trustees sponsored a bill presented to the legislature to put school-board employees under a separate civil service to be created and maintained under control of the board of education. This attempt was unsuccessful.

In an effort to collect school funds, principals and parent-teacher associations of 40 Chicago schools have been collecting old newspapers. Children brought papers to school on certain days and junk dealers would buy them. Substantial sums were raised and the schools were able to purchase power radice and other conjuncts. new radios and other equipment.

Chief Engineer John Howatt recently made an investigation and pronounced such practices insanitary and a source of fire hazard. In one instance it is reported that he found three tons of old paper covering a large section of a gymnasium floor. The engineer-custodians of the buildings likewise objected to the projects.

Following the chief engineer's report Superintendent Bogan the practice was ordered discon-

Having exceeded its income practically every year since 1916, and even its borrowing power for the educational fund fully exhausted, the school board

faces a serious financial crisis this year. Added to the other troubles, there have been no taxes paid this year because the 1928 assessments were discarded as full of inequalities, and the reassessments have been delayed indefinitely. The school-board auditor has reported that the schools would have to close September 20 unless relief could be found. After considering eleven different types of revenue relief, the school board finally settled upon the plan of a tax rate increase for the pext two

the plan of a tax rate increase for the next two

There is always opposition to increased taxes, so There is always opposition to increased taxes, so a huge program of publicity was launched involving moving pictures, slides, shadowgraphs, printed pamphlets, and speakers. A bill was introduced in the legislature—House Bill No. 633. It was endorsed by the signatures of 214,000 parents. Eightyone per cent of the teaching force spoke in its behalf. Civic groups passed resolutions, organizations and individuals showered thousands of telegrams and letters upon the general assembly, and a considerletters upon the general assembly, and a considerable number of school people worked for the bill at the state capitol.

Serious opposition arose to the school-tax increase Serious opposition arose to the school-tax increase bill. The opposition tried to prevent its passage through the House, but after several delays, it was passed 92 to 7. The same opposition then concentrated its energy in the Senate and unexpectedly presented a series of amendments. These amendments were defeated by the narrow margin of a 25 to 24 vote. Thereupon the senate passed the bill 41 to 1. bill 41 to 1.

Although the new law does not bring in any more money until the taxes are paid, following the completion of the reassessment, it extends the borrowing power of the school board by about \$12,000,000. On the strength of its passage the school board is going ahead with plans for opening the summer vacation schools.

vacation schools.

At a recent meeting of the tax-spending bodies held at the city hall, fear was expressed that the reassessment would not be completed so that tax payments for 1928 could be made before June, 1930. Now that the school tax bill is passed by the legislature, this is not so serious as long as the banks will continue to loan the money to keep the schools open. The only uncertainty is how long the banks can continue to absorb anticipation warrants. The banks are carrying "frozen" paper for practically banks are carrying "frozen" paper for practically every taxing body in Cook county, and the total is running into the hundreds of millions of dollars.

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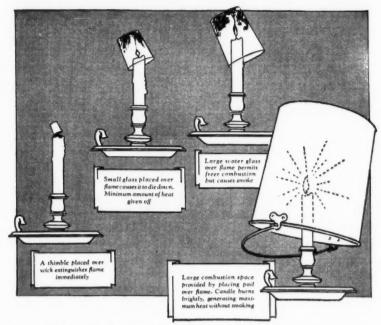
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Reduction of available air space around a candle flame withholds proper oxygen supply and causes incomplete combustion or extinguishes the flame. The Pacific's large combustion chamber insures maximum efficiency because the fuel has ample opportunity to mix with air and burn.

# Giving combustion a chance



Any old kind of a firebox won't do! Average soft coal runs 24% to 48% volatile gas. Insufficient combustion space permits much of this gas to escape up the flues unburned... and there is a loss of 2% in the fuel for every 4-10 of 1% of carbon monoxide (partly burned gas) in the flue-gases.

The U. S. Bureau of Mines, after exhaustive tests, recommends a minimum of five to six cubic feet of combustion space per square feet of grate surface in order that the volatile gases may have time and space to mix with air and to burn. This is the standard on which the Pacific Steel Heating boiler is designed, its combustion space running 15% to 35% larger than that in other boilers.

Again and again the Pacific has demonstrated its fuel economy in flue-gas tests. Consistently, Pacific has proved that the maximum of available heat units in the coal is being obtained.

STEEL HEATING BOILERS

AND CAPITOL RADIATORS MAKE A LOGICAL COMBINATION



Added to large combustion space, positive circulation, and large direct heating surface is the rugged welded construction which has made the Pacific leader in its field and dominant in the industry.

There is a Pacific installation to fit your next building. Write for literature.

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Factories: Waukegan, Ill., Bristol, Pa. Sales Offices in 58 Cities

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## 200 A

# Almost a Half Century of Experience Stands Behind "XOXGO" School Service



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Porcelain enamel iron roll rim drinking fountain. Vitreous china bubbler with concealed pressure regulator controlled by china index push button valve. Nickel plated brass trimNo one factor has contributed so much to the safety and health of school children as plumbing fixtures which are thoroughly reliable and scientifically designed from the standpoint of sanitation.

Consider that N. O. Nelson was the Pioneer Manufacturer of Plumbing Fixtures for Schools, and that ")(0)(C()" has stood for the finest in school plumbing equipment for almost half a century. Consider also that many of the original ")(0)(C()" school installations have stood the test of more than 45 years of continuous, trouble-free service and are still performing satisfactorily.

Whatever your plumbing problems may befeel free to call on "YONCO" engineers for the expert advice which they offer without placing you under the slightest obligation.



4419 N

Wall fountain of vitreous china with integral trap housing; furnished with 2-stream mound building projector and automatic stream control. All exposed brass trimmings heavily nickel plated.

## N. O. NELSON MFG. CO.

Pioneer Manufacturer of Plumbing Fixtures for Schools

ST. LOUIS, MISSOURI





the community. On the contrary, it may be affirmed with little fear of contradiction that, from the economist's point of view, the growth of prosperity in the United States as a whole has been so enormous as to make the proportion of educational expenditures to the real wealth of the community actually smaller than it was in past decades."

It is apparent then that: If the schools are to reform the republic, the republic must first reform the taxes.

#### THE FETISH OF COURSES FOR TEACHERS

suffering, education and citizenship are suffering, because educators who know better are driving teachers away from their schoolwork to college courses for academic credits when by a slight change of attitude on the part of superintendents, teachers would be paid for proficiency in teaching and would be encouraged to gain increased proficiency by attending college courses, or by travel, or by personal reading, or by experiments at school, or by current exchanges of experiences with fellow teachers.

# A COMPARISON OF PRICES PAID BY CENTRAL PURCHASING AND INDIVIDUAL DISTRICT BUYING FOR SCHOOL SUPPLIES (Continued from Page 50) Shows the average price paid by the districts

(Continued from Page 50) shows the average price paid by the districts for each unit of supply. It also shows the recent prices throughout the country may be well each, and the per cent of saving.

The study represents 376 prices paid by the individual districts. The results are decisive and warrant the conclusion that a general trend of rices throughout the country may be well estimated.

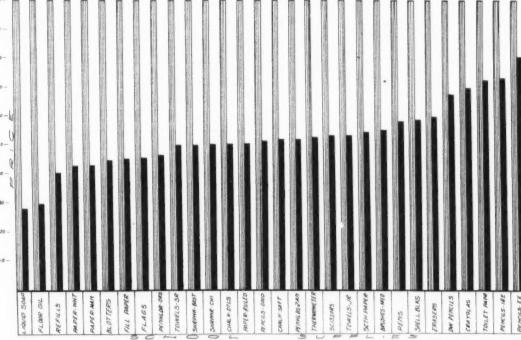
The results decidedly favor the central purchasing plan for supplying school materials. The table shows that 47 per cent of the saving has been secured over the individual district pur-

chasing. This does not include the amount saved through the purchasing agent's contract prices, which include delivery to the school, as opposed to the usual F. O. B. shipping point prices, the individual schools secured. Complete data are not available for the saving on delivery charges, but a minimum of 3 per cent is estimated by the purchasing agent.

This 47 per cent of saving, not including the consideration of delivery as explained in the

preceding paragraph, is illustrated in Figure 1. The crosshatched bars represent the prices paid by the various districts for each of the 30 items of supplies. The black bars represent the prices paid by the purchasing agent for the same items. The central purchasing plan in no instance is approached in its saving closer than 19.3 per cent in the average prices. On the other hand, its savings over the individual buying is as high as 71.9 per cent. Of the 376 purchases investigated (Concluded on Page 144)

## FIG.I-PERCENT. SAVED BY CENTRAL PURCHASING FOR EACH OF THIRTY ARTICLES OF SUPPLIES



BAR INDICATES ONE DULLAR EXPENDED BY TWO BARS REPRESENTING DISTRICT AND CENTRAL PURCHASING-THE CROSSMATCHEN BAR INDICATES ONE DULLAR EXPENDED BY DISTRICT FOR A GIVEN UNIT, THE BLACK BAR IS THE PERCENT OF THAT PRICE PAID BY PURCHASING AGENT FOR THE SAME UNIT FOR EARMILE THE AGENT PAID 28%, OF THE PRICE PAID BY DISTRICTS FOR SAME UNIT OF SAME

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## Interiors are

# handsome, well lighted, lastingly clean



ISITORS to this new Toledo high school are impressed by the beauty of interiors painted with Barreled Sunlight. Faculty and students enjoy an agreeable light reflected without glare. And the school management appreciates the practical qualities of this handsome paint

Without repainting and with only an occasional washing, Barreled Sunlight remains clean, fresh and new looking month after month. So flawlessly smooth and non-porous is Barreled Sunlight, dirt simply cannot embed itself. Dust, smudges, finger marks are instantly removed with a damp cloth. And when a thorough cleaning finally becomes necessary,



Barreled Sunlight washes like tile without wearing away.

In Full Gloss, Semi-Gloss and Flat. Drums and cans. Easy to tint. For priming, use Barreled Sunlight Undercoat. Note coupon below.

U. S. Gutta Percha Paint Co., 44G Dudley Street, Providence, R. I. Branches: New York - Chicago - San Francisco. Distributors in all principal cities.



#### Barreled Sunlight is easily tinted

Any desired shade may be obtained by mixing ordinary colors in oil with Barreled Sunlight white-or by using the handy tubes of Barreled Sunlight Tinting Colors, now available in two sizes. Quantities of five gallons or over tinted to order at the factory without extra charge

Barreled

Sunlight

U. S. GUTTA PERCHA PAINT CO. 44G Dudley Street, Providence, R. I.

Please send us your descriptive booklet and a panel painted with Barreled Sunlight. We are interested in the finish checked here.

Gloss ( ) Semi-Gloss ( ) Flat ( )

......State.....

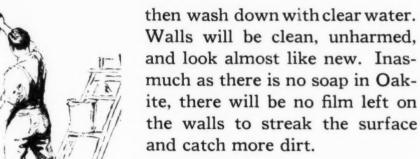
# The Summer lay up is here—what remedy for dirty walls and woodwork?

THE Summer lay-up is here, with a year's work for the school engineer to do in a few short, hot months!

One of his biggest jobs is the repainting of walls and woodwork.

Yet frequently this can be postponed—those dirty finger marks and other soiled spots are only on the surface, and can easily be removed.

Simply use an ounce of Oakite to a gallon of water. Sponge off the dirt and smudges;



Our Service Man in your locality can give you facts and figures on how Oakite, by saving time, materials, and work, lowers the cost of all school cleaning. Write and ask to have him call. No obligation.

Manufactured only by

OAKITE PRODUCTS, INC., 26B Thames St., NEW YORK, N. Y.

# OAKITE

Industrial Cleaning Materials and Methods

Oukite Service Men, cleaning specialists, are located in the leading industrial centers of the United States and Canada.

(Concluded from Page 142

there were only 5 instances where districts secured prices as low as the purchasing department. One of these was, in one purchase, a 3 cent better price on scissors; the second, a 3 cent better price in one purchase on spelling blanks; third, a 2 cent better price on one purchase on drawing pencils; fourth, in pencils "one" and "two," prices were the same; and fifth, on the same item a better price by 7 cents was secured.

In other words, only 1.33 per cent of prices in the district were as good, or letter, than those of the purchasing department.

A further graphical treatment in Figure 2 again shows the relative superiority of the central purchasing plan. These two curves were plotted from the series of 30 prices in each system of purchasing. The broken line indicates the unit purchased for \$1 by the purchasing agent. The solid line represents the amount of the same

commodity, received by the district buying for \$1. Construction of the curves would not permit a common scale for all items, hence it is necessary, should occasion demand more literal interpretation, to scale each item. Such, however, is not the purpose of this graph. The curves were designed primarily to present in general, the outstanding superiority of the central purchasing plan.

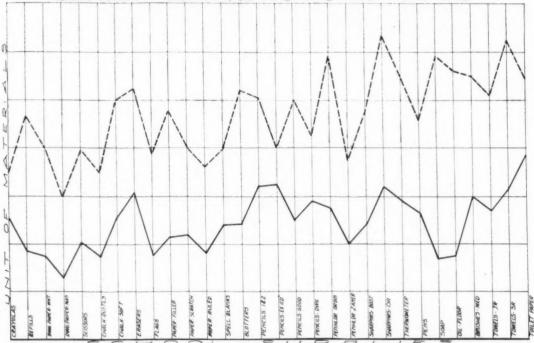
The statistical treatment may be summarized by showing that approximately 1.33 per cent of 376 purchases favor very slightly the district buying; in 59.31 per cent the prices of the districts were from 10 to 100 per cent higher than the purchasing agent's price; in 32.71 per cent the district's prices were from 100 to 200 per cent higher; in 3.98 per cent they were 200 to 200 per cent higher; in 2.39 per cent 300 to 400 per cent, and .26 per cent more than 400 per cent greater.

The outstanding feature of the study is readily seen in the general interpretation of the data, based on the 376 cases and gives a total result that points toward a doubtless trend. That the new plan is decidedly a saving, is affirmed by each of the thirty items, the lowest of which is 19.3 per cent. There is an average saving of approximately 50 per cent, considering delivery charges in the contracts.

Fairly reliable conclusions may be drawn from a number of as large as 376 cases. This is especially true where all data indicate definitely a common tendency as in this study.

The standardization of supplies is an important factor from many points of view, but that of economy is of particular value in this study. Standard supplies maintain a common quality and larger quantity, both of which affect prices. Standard forms are important to both economy and convenience which affect the saving.

FIG. II, COMPARING PURCHASING POWER OF DOLLAR BETWEEN CENTRAL AND DISTRICT BUYING



THE INTERSECTION OF EACH VERTICAL LINE WITH THE BROKEN CURVE REPRESENTS ONE UNIT PURCHASED FOR ONE DOLLAR BY CENTRAL AGENT. THE SOLID CURVE SHOWS PORTION OF THE SAME UNIT SECURED BY DISTRICTS FOR ONE DOLLAR

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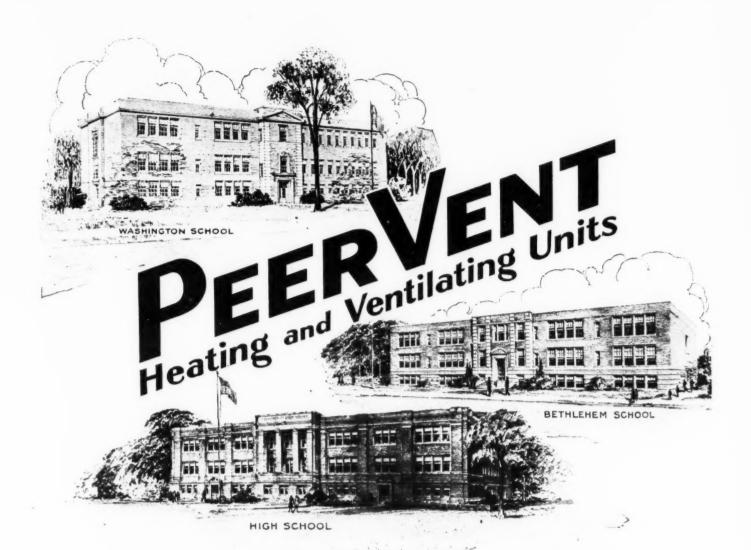
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## Lackawanna, N. Y., Schools

FIRST INSTALLATION, Public School No. 3 **SECOND** No. 2 . . . . 1924 THIRD No. 5 . . . . 1924

## and now —

these four new schools—all equipped with PEERVENT Heating and Ventilating Units

Peerless Unit Ventilation Co., Inc. Pioneers in Unit Ventilation
Bridgeport, Connecticut
Selling Agents in Principal Cities from Coast to Coast

Architects wanna, N.Y., Schools Bley & Lyman Buffalo, N.Y.



ROOSEVELT SCHOOL



## you can't compromise with HEALTH!

HERE is no middle-ground where the health of children is concerned. Toilet sanitation is of the utmost importance in both public and private schools. Old-fashioned, unsanitary toilet compartments must go---they are a source of dirt and disease that every school should abolish.

Modernize your present toilet rooms, and insure sanitation with WEISTEEL equipment. The first cost is within the reach of any rehabilitation appropriation. Installation is inexpensive since practically all fittings are attached at the factory. Complete erection instructions accompany each shipment and your school maintenence staff can erect this equipment with only a minimum of effort.

In every respect WEISTEEL construction will reflect the soundness of your judgement for many years to come. We will welcome the opportunity to show you how your school can benefit by a WEISTEEL installation. Just fill in the coupon below and complete information will be sent at once . . . Henry Weis Manufacturing Co., Inc., Elkhart, Indiana.

\_\_Mail This Coupon Today\_\_\_\_\_

HENRY WI	
Elkhart, I	ndiana

Gentlemen:

Please send me complete information concerning Wei-steel Sanitary Toilet compartment equipment.

NAME
STREET
CITY
STATE

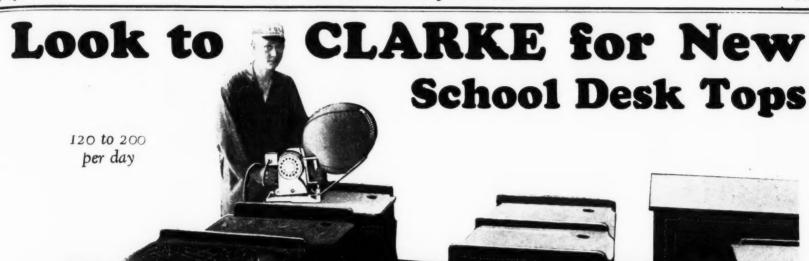
## JANITARY FOUNTAINS



GET a clear-fresh-health-ful drink every time from the Rundle-Spence Vertico-Slant Fountain. The slight slant stream prevents water from falling back upon the jet. Lips cannot touch the R-S Nozzle. \* \* \* \* Sanitary Drinking Fountains, Bath and Plumbing Fixtures and Supplies are included in the R-S line. Write for illustrated catalog.

RUNDLE-SPENCE MFG. CO. 51-Fourth Street. Milwaukee, Wis.





SURROUND children with beautiful things, with things they may treasure and preserve, and they will learn much faster than words can teach them, the care and preservation of property.

Of course, we all know this. The ragged scarred desk tops, for instance—the surface most often seen, most often touched at school—how can they be made and kept always smooth, gleaming, beautiful?

There is a way. Many schools in almost every section of the country now use it.

In these schools the Maintenance Department owns a Clarke Vacuum Portable Sander. This 22-pound machine runs off a light socket and, because of its inbuilt vacuum, creates no dust in the air. In less than four minutes it makes a scarred, ragged desk top as smooth and bright as a

new desk just out of the factory. This machine is perhaps the most widely used sander in industry today. It lasts a lifetime.

With the Clarke, 8 hours of any week end is sufficient to resurface 120 to 200 desk tops and present a new beautiful working place to every boy and girl on Monday morning. And throughout the week the Manual Training Department will welcome the Clarke, use it to train boys with industry's own tool.

It takes only a few minutes to write or just use the convenient coupon. The facts will prove valuable to you.

Clarke Sanding Machine Co.
Dept. G-37, 3821 Cortland St., Chicago, Ill.
Originator and, for 12 years, Manufacturers of
Portable Sanding Machines

In the Manual Training Department the pupils will welcome the Clarke—industry's own tool.

Clarke Sanding Machine Co.,
Dept. G-37, 3821 Cortland St., Chicago, Ill.

Gentlemen: Without obligation, send me the facts about the powerful, fast-cutting Clarke Vacuum Portable Sander.

Gentlem about the	he		p	10	N	V	r	f	ul	0	u	f	a 8	o	b	CI	u	tt	i	n	3	1,	C	la	ıe	n k	d		V	n	e	u	t	h	m	F	a	DI	t
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## TABLE REPRESENTING PERCENT. SAVING BY CENTRAL PURCHASING OVER DISTRICT BUYING

SIZE OF DISTRICT	350	10	100	00			10	0 7	0	300		4	VER	AGI	E 013	STR	CTS			01	STA	VCT.	3 8	ELON	N	100 E	NRU	PLLM	EN	7	COL	PAR	SON ICES
SCHOOL SUPPLIES	DISTRICT	2	3	4	2	9	7	89	6	01	11	12	13	14	15	9/	17	18	61	20	21	22	23	24	25	97	27	28	29	30	NEAT PARTS FOR DISTS	PRICES FOR AGENT	BY ACENT
RAYOLAS	206			.06		0673	0625	07	26	06			075		0425		0625	.075		075	06	.075		075	475	075		092	09		11105	050	AT 30
EFILLS		09			.21	15																				-		25	-	23	186	075	111 3
WG PAPER - WHITE	150	.8/		. 90			85	2.00	150	100			150				1.50	2.00	2.00	175	175		2 50	1.50	175	200			/ 50	250	1.610	690	980 5
ING PAPER - MANILA		78	1.20		100			1.25		90	75	175	175	7.25		-	.90	1.00		/25	75	125	2.50		125	125					1 202	317	686 5
CISSORS	3.10			390			259	2 75		210		3.60	422		3.75		3.75	2.50	350	3 85				405	1.65	3.25	3.00	3.25		3 00	3 160	1.680	1.480 44
HALK- DUSTLESS	50		-	32			55	75	60	55	60		,80		80			.70	.75	.80		80	.70		80	75	75		#5		697	350	347.4
HALK - SOFT													65	50	50	35	.50			50		.50									500	260	240 4.
ERASERS		/53	175	150	1		175						275	2.00						2.00				2.00			2.50		1.75		2 886	1.250	836.4
LAG5			310			400	540	450					-						12.50					-		4.00	450		6.10		6.110	2 790	3 328 54
PAPER-FILLER			.70	125	95	85	70	90	75	6.5	125	100		90			-	85	-	400	_90	90		1.35	100				63	1.35	.96/	435	526 5
PAPER - SCRATCH		23	300	×	2.75	300		3.50	300		250	-	4.00	3 25	400		2.75		3.50	4.00	3.00	3.25	3.50	3.25	325		3.00	3.50	2.45	400	3.213	1750	4634
PAPER-SCTH-RULED	-	-	-	-	35	25	-	-	-	-	35	24	-	-			*********	25			_				35		_	-	700	-	290		
SPELLING BLANKS	_	-		63	-	80		85		-	-	_	1.00	-	-		-		80	- 50	90		70	.44		80	.75	50		120	800	4.70	330 4
BLOTTERS	.26			30	30	65		65	50	35	25	52	60	35	.30		35	.65	60	90					35		60		1.00	100	524	235	28953
PENCILS-182			.52			1	.60	60	45	49	.46	60	60	60	54	.46		50		60	37	1		.54	30						506	370	136 21
PENCILS - EX GOOD	30			36	40		39	31					.44		-	42		38	1	-	40	44	40	-					46		409	330	279 19
PENCILS GOOD		40	2	1		1 40	)		26				1	38		373	5	-				-			40	29	30		22		33/	170	1614
PENCILS - DRAWING								1	27	40							-	-		-		60	-		-0.	-	-		derret slace	-	429	230	/39 32
PENHOLDERS-ORD		24	26	5		30	50		25				35	3.5	35		.30	45				35		25	35	45	40			100	3.95	/85	210 5.
PENHOLDERS ZAMER								60						1						200	90			90							750	390	360-44
PYKL SHARPYRS BOST					1/50		120		250				200							200					200		-				/.300	950	950.50
PACL SHARPNES-CHIC			1.2	0		249			1	175		109		1.25	125		100	100			1	125	1.10			100					1273	640	633.43
THERMOMETERS						1	125		1		125		11,25				1.00		1			1.00			100			150	65		1.100	580	520.4
PE'03		63	3 .70	2 64	75				75		1.15	75	90	1 / 50		60	75	100		1.00		1.50	1.25	75	75	. 75	. 75	84	125	125	9/3	530	303 4
LIQUID SOAP			15	0/100		85	5					1.25		1.00	150		1.25	100		150		1.50		1	150		75	95			1.187	339	854 7
FLOOR OIL	64	2		30				1			1								1	.60											564	167	399.7
BRUSHES - MED				525											1			1		5.81		1									5 53		2.492 4
TOWELS JR			1			11.0				10:00	900	900	)	950		_	9.00	14050	2	1100	9 50			950	10 50		11.50	12.00	1/2 00	1	18.216	5.450	4766 4
TOWELS - SR						1050	2 /3 00				1				1	1			1	_		1	15.00		-	12 00					E.540	6 230	6.250 5
TOILET PAPER		1					1050	1200		10.50			1		9.50	7	_					950	1	1350				1			10 916	7948	2 236 2
	1						1	1	1	1	1	1	1	1	1	7		1		-		1	1	-	1		1	1	1	1			AN-A

(See Page 48)

#### THE USE OF FUNDS FOR PUPIL TRANS-PORTATION

(Continued from Page 66)

used to provide for the transportation of children to parochial schools since money raised by taxation for public purposes may not legally be diverted to private uses. And, it is generally held, boards of education need not furnish actual transportation in school vehicles driven by hired drivers, but may allow a reasonable compensation to the parents for the conveyance of their children in such manner as they see fit or may, if it seems advisable, offer board or lodging at some place near the school.

## THE CENTRAL WAREHOUSE OF THE PASADENA SCHOOL SYSTEM (Concluded from Page 68)

budget balances is kept in conjunction with stock records. When funds are not available under budget allowances, requisitions are returned. The issue of stock supplies is limited by the available funds, and charges against the funds can be made only on order of the principal of the school, who is required to carry out the educational program and secure the materials needed according to the enrollment. A loose-leaf catalog listing all items carried at the warehouse is furnished each school or department authorized to draw on that stock.

The Central Warehouse is the property of the Pasadena City High School District. The Pasadena Elementary School District pays an annual rental for the space used to store the stock owned by the elementary district. The warehouse is part of a comprehensive plan to centralize all service facilities. Adjacent to the building, ground has been reserved for future shops, a garage, and for

storage sheds for busses and trucks and materials salvaged from the various school buildings. It is planned to build these when funds can be secured.

#### ALLOTMENTS AND COSTS OF JANITORIAL-ENGINEERING SUPPLIES

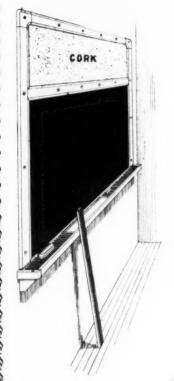
(Continued from Page 69)

## TABLE IV. COMPUTED COSTS OF JANITOR SUPPLIES FOR CITY OF 10,000 A.D.A.

	A.D.A.	Total
Articles	Cost	Cost
Paper Towels	\$.108	\$1,080
Floor Brushes	.05	500
Light Bulbs	.036	360
Tollet Paper	.031	310
Furniture Polish	.020	300
Soap, Toilet	.020	200
Floor Oil		200
Dust Cloths	.016	160
Mops, Floor	.009	90
Soap, Soft		90
Disinfectant	.008	80
Sweeping Compound	.006	60
Cleaning Compound	.006	60
Brooms	.005	50
Lubricating Oil	.003	30
Chloride of Lime	.002	20
Kerosene		10
Bon Ami		10
Total cost of 18 it	ems. \$3.610	-

The method of computing the cost of supplies as used in Table IV is a shortened form of the method illustrated in Table V. While the method as used in Table IV is vastly superior to the usual practice of using the budget amount of the previous year plus a nominal per cent of that amount for the next year's increase in attendance, as a basis for budgeting for the next year, it is not sound in that there is a tendency to allow the per capita to remain static, in which case we find that the allotment per capita is the variable. The variable should be the unit price because the price of supplies is not static. It should be kept in mind that, while the per capita allotment after being standarized may be constant, the per capita cost will vary as prices change, hence the necessity for starting with the per capita allotment as the base for computation.

## Dudfield's Dustless All Metal Crayon Trough and Eraser Cleaner



A most SANITARY product which should be used in all schools and which may be used with or without vacuum cleaners.

## Endorsed by Leading Hygiene Experts



Write for nearest representative, prices, details and samples

Manufactured by

## DUDFIELD MFG. CO. LIBERTY, MIS

A.D.A. Allotment 1/37 1/80

## EMIL BROWN & COMPANY

Manufacturer for Pacific Coast States

Los Angeles, Calif.

Using the average per capita allotments and unit costs of Table II the cost of the janitor supplies for the same city of 10,000 average daily attendance will be shown in Table V

It must be borne in mind that the eighteen items that appear above account for 70 per cent only of the total cost of janitor supplies in the 20 cities which furnished the data upon which

aper Towels ....

Brushes
Light Bulbs
Tollet Paper
Furniture Polish
Soap, Liquid
Floor Oil
Mops
Soan

Disinfectant
Cheesecloth
Sweeping Compound
Lubricating Oil
Chloride of Lime

Kerosene Bon Ami Cleaning Compound

Total cost of 18 articles

TABLE V. COST OF JANITOR SUPPLIES

allotments, the per capita costs, and the unit costs are purely tentative. It is felt that procedures have been outlined that may be useful in validating the data that have been gathered, to the end that one factor, namely, per capita allotments, may become standarized to a greater degree than is the case at present. It is not expected that a standard list will be used in its

HAVING AN Number Required 270 125 714 26

TABLE VI. ACTUAL COST OF JANITORIAL-ENGINEERING SUPPLIES IN THIRTY CITIES AND COSTS OF THE SAME WHEN DESIR-ABLE MINIMUM AVERAGE AND LOWER QUARTILE AVERAGE ARE BEING

	de Carre	USED AS	BASES	
		Actual Cost	Cost at	Cost at
Cities	Total	of Supplies	50c per	23c per
	A.D.A.	Used	A.D.A.*	A.D.A. **
1	659	\$ 735.80	\$ 329.50	\$ 151.57
2.0	557	593.75	278.50	128.11
3	317	267.40	158.50	82.91
4	927	678.75	463.50	213.21
5	827	550.00	413.50	190.21
6	10,419	6,890.00	5,209.20	2,396.37
7	7.869	5,000.00	3,934.50	1,809.87
8	900	507.80	450.00	207.00
9	1,436	808.92	719.00	315.86
10	7.508	4,097.03	3,754.60	1,727.07
11	720	360.78	360.00	165.00
12	22,860	10,172.00	11,430.00	5,257.80
13	15,373	6,600.00	7,686.50	3,535.79
14	231,383	94,867.03	115,691.50	53,218.09
15	16,869	6,556.19	8,434.50	3,879.87
16	5,808	2,169.67	2,904.00	1,335.84
17	1.747	633.93	873.50	401.81
18	22,798	8,050.00	11.498.00	5,284.94
19	6,698	2,200.00	3,349.00	1,540.54
20	2,566	832.64	1,283.00	590.18
21	3,811	1,281.35	1.905.50	876.53
22	2,156	677.50	1,078.00	495.88
23	23,014	7,000.00	11,507.00	5.293.22
24	13,671	3,886.33	6,835.50	3,144.33
25	8,296	2.144.00	4,149.00	1.908.08
26	7,194	1,820.11	3,597.00	1.654.62
27	42,836	10,759.37	21,418.00	9,852.28
28	12,410	2,537.19	6,205.00	2,854.30
29	8,596	1.541.82	4,798.00	1,977.08
30	26,324	4,553.65	13,162.00	6.054.52

the average daily attendance allotments and unit costs are based. Hence, the total cost of janitor supplies in a city having an average daily attendance of 10,000 will approximate \$5,000, which amount is a reasonably liberal one as is evidenced by the fact that a city spending such an amount would be spending the median amount for cities of the third quartile as shown in Table I.

In order to bring out clearly the difference in the amounts spent for janitor supplies in various cities, a comparison is made giving the actual cost of the supplies in thirty cities, the cost when a desirable minimum per capita is used, and the cost when an undesirable low per capita is used. This comparison appears in Table VI.

There is need for further study in the field which is the subject of this study. The per capita

entirety. One of the main difficulties encountered in the gathering of comparable data from different systems, is that the lists of janitor supplies are highly variable in different systems. With this in mind a rather complete list of janitor supplies, not including equipment, is being submitted to a number of schools to ascertain the current practices. In this list there is a grouping of janitorial-engineering supplies under the following heads: cleaning supplies, pupils' sanitary supplies, janitors' repair and replacement supplies, and miscellaneous supplies. By such a grouping it is believed that further study of current practices will be facilitated, and as a result of such study a complete list of janitorial-engineering supplies with costs and allotments may be compiled.

\*The per A.D.A. cost of this column is derived from the data of Table V and represents the average per A.D.A. of the cities reporting in detail the per capita allotments and costs. \*\*The per A.D.A. cost of this column is derived from Table I and represents the average per A.D.A. cost of the cities of the lower quartile of that table.

PANAMA ARCHITECTS FORM
PARTNERSHIP
Roland C. Buckley, architect, Henrique G. Arango, engineer: Emanuel Lyons, engineer, of the Republic of Panama, have recently formed a partnership under the firm name of Buckley, Arango & Lyons, architects and engineers, with offices at 27 Avenida Centra, Panama rep de Panama.

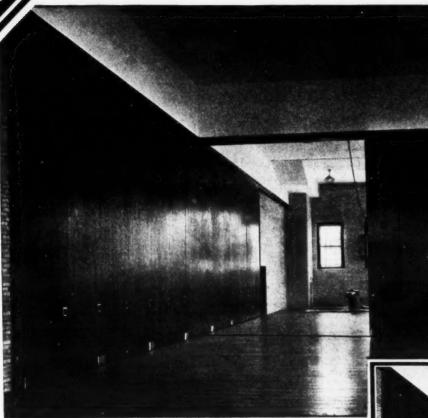
The firm has acquired the architectural and engineering departments of Wright, Haw & Company, Ltd., and Greibien & Martinez, Inc., who will continue as constructors.

as constructors

REMOVAL OF ARCHITECTURAL OFFICE
The office of Paul Boucherle, architect, has recently removed to its new location at 301 First
National Bank Building, Youngstown, Ohio.

SECTIONFOLD

PARTITIONS



Sectionfold Partitions in Beebe Jr. High School, Malden, Mass, Architects, Desmond & Lord, Boston, Partition in background divides gymnasium into two parts, Section at left separates gymnasium from auditorium,

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#### T U R C 0 L $\mathbf{M}$

#### A STUDY OF SCHOOL DESKS AND SEATS

that the contact points of desk hinges be pro tected by belt or rubber. This requirement should not be made when the contact points concerned may affect a more vital requirement, i.e., the proper permanent tilt of the seat. Another error in making seat stops is the use of friction balls, or rollers. It is very hard to set these to maintain a correct tilt.
(To be concluded in August)

#### NEW YORK'S SCHOOL-BOARD CONVEN-TION ACTIVITIES

(Concluded from Page 86)

something about the problems that make that policy desirable.

"All of the growing and progressive superintendents of the state desire to have their boards a part of this organization as they recognize its value, not only to the school system, but also to them personally. They do not fear a member who has been exposed to the broadening and enlightening influences of our association conferences. Their main fear is of the member who blocks all progress by voting down their proposals as 'fads and frills' through ignorance of modern school methods. They recognize in our association an agency of the greatest value to aid them in their

"With real cooperation between the teachers', superintendents', and school-board associations, the best interests of the schools of the state are bound to be protected. It does not require much imagination to picture to ourselves the immense resources of these organizations for molding public opinion and checking adverse legislation. Our interests and aims are common, namely the provision of the best posssible training for the children of this state for life and citizenship.

"I do not need to convince those of you who have attended any of the conferences, during the past five or six years, of the value of these conferences. I have tried to outline briefly the in-

creased value that should result from our reorganization and increased dues. These dues are an insignificant part of your total budget and only about one third of the amount paid by your municipalities for membership in the mayors' conference. What our members get out of our organization depends largely upon what they put into it. If they merely pay their dues and let it go at that, they get no direct benefit, but if they make use of its services and above all send representatives to our regional and annual meetings they will receive good dividends upon their investment.

The State Meeting in October

The regular state convention has been set for October 14 and 15, 1929, to be held in the city of Troy. Every board of education is invited to send at least two members to the conventionmore if possible-and thus help to make it a record gathering. The program, now in hand, will include subjects in which every board member is interested. The speakers will be of the type to command the highest attention, and each will be an authority on the subject he has been asked to discuss.

#### THE DAYTON SCHOOL BUILDING PRO-GRAM-Part I

(Continued from Page 56) of education in Dayton has not concerned itself with the details in the carrying out of these policies. Rather, it has determined the general policies and wisely left the execution of these policies to the proper officers of the board. It should not be inferred, either, that the various steps mentioned have been taken in the order given. Anyone familiar with the operation of a building program knows that many of these steps will be taken simultaneously, and others at varying intervals of time.

Time spent by a board of education in deciding educational policies before embarking on any building program is time most wisely and profit-

ably spent. Before a single blue print was made, the board of education determined very important and far-reaching educational policies. Several illustrations of this may be given.

A minor policy, but one of importance, concerned the size of buildings to be erected. After a careful consideration of the whole problem and comprehensive reports from the proper school officials and architects, it was decided that whenever practicable the unit for an elementary school should be not less than 800 pupils, for a junior high school not less than 1,200 pupils, and for a senior high school not less than 1,600 pupils. Of course the needs of many communities necessitate variations of this policy.

Another illustration of an essential policy to be determined concerned the building of additions. The problem might be stated as follows: Should additions be built as a unit for a new building, or should they be considered merely as continuation of an old building? The board of education decided that the additions should be so constructed that they would be the unit for new buildings when the old buildings should be replaced. In order to do this most effectively. sketches of the entire new building were made so that the officials of the board could visualize the completed project. Here again we find that it is impossible to apply hard and fast rules. In many instances it may not be practicable nor economical to make the addition such a unit. This, however, does not alter the general policy of the board of education.

#### The Fireproofing of Buildings

Another question which came before the board had to do with the fireproofing of the existing buildings. The question was raised as to whether it was good policy to compel children to attend older buildings which were not fireproofed and to provide such structures only for those children fortunate enough to live in the newer districts
(Concluded on Page 152)

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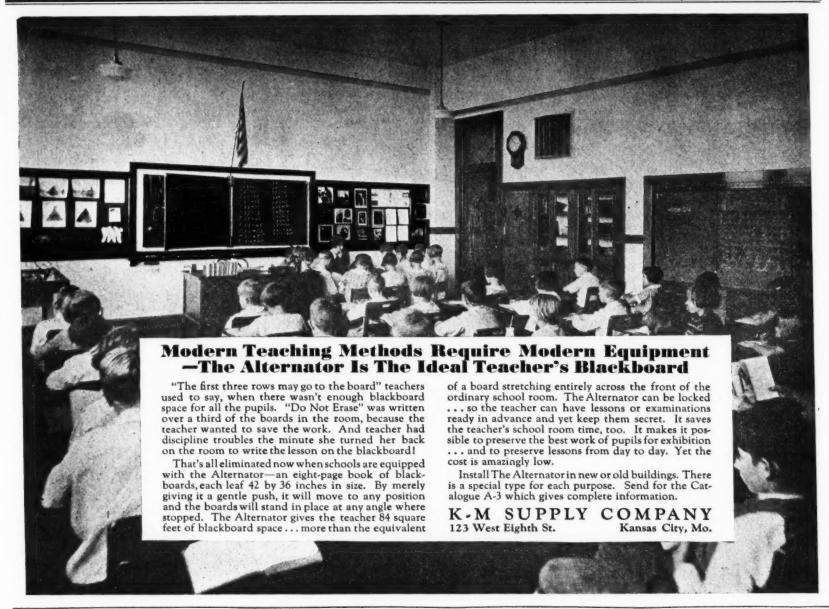
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L C Smith & Corona Typewriters Inc School Department, Syracuse, N. Y.



(Concluded from Page 150)

or districts where new buildings were being erected. The board determined that every school building in the city, except those which shortly were to be replaced or which were built of fire-resisting material, should be fireproofed. The fireproofing of the old buildings meant, in most cases, a complete remodeling of the heating, ventilating, and sanitary equipment. These buildings are now quite as safe and sanitary as any of the new buildings in the city.

The most far-reaching of the policies of the board of education, however, had to do with the erection of new buildings. Before any plans were ordered prepared by architects, the board of education gave a great deal of time to a serious discussion of the educational reorganization of the school system.

If it is true, as Judd has stated, that the school building is only the outward expression of the curriculum, it is also true that the school building is the outward expression of educational organization.

Three illustrations may be given. In its building program the board had raised for them and answered these questions: Should the school system of Dayton be reorganized on the basis of the junior-high-school plan? If so, should this plan be the 6-6-6, the 6-3-3 plan, or some combination of these plans? It was decided that the school system should be reorganized on the basis of the junior-high-school plan, but that no final decision should be made relative to the type of junior-high-school organization which should be adopted. The far-reaching effect of this decision upon the building program is too obvious to need further mention.

#### The Teacher-Training Problem

Another problem which came before the board of education was this: Should Dayton continue to maintain its own normal school? Upon this

decision rested the building of a normal-training and demonstration school. Should this decision be favorable, an entirely different type of building would be required than if a negative verdict were reached. In this case the entire problem of teacher training in Ohio was canvassed, with the result that the board of education decided to continue the normal school, and thus to build a normal-training and demonstration school.

Another illustration of the far-reaching effect of such decisions of the board and of the importance of having them made prior to the beginning of a building program, concerned vocational education. The question was asked, What should be the attidue of the board of education toward the subject of vocational training? Should the cooperative high school be continued? Should provision be made in the building program for the erection of a technical school? What provision for shops should be made for each of the junior and senior high schools? Although none of these problems has been determined in its entirety, the policy of continuing the cooperative high school was approved.

Enough illustrations have been given to show the great importance of a careful and scientific study of the various problems involved before actually embarking upon the construction of new buildings.

What has been said so far in this article has been only to emphasize the fact that schoolhouse planning is a highly technical undertaking, regardless of the size of the city, and should only be undertaken after the board of education has availed itself of the most careful and scientifically prepared facts available. With the mounting cost of school buildings it has become extremely important that no mistakes shall be made, that policies shall be carefully outlined, and thor-

oughly studied, and that nothing shall be undertaken until a full knowledge of all of the facts is available.

In all, the total expenditures of the board of education, in this last building program, were \$4,177,603. With this amount six new buildings, with a total seating capacity of 5,998 seats have been erected at a cost of \$2,295,004, eight additions with a total seating capacity of 2,000 have been built at a cost of \$808,108. The net total additional seats, after deducting for replacements, is 5,758 seats. Of the amount spent, \$150,080 was for sites, \$327,870 for equipment, \$341,606 for fireproofing, \$24,524 is retained for plans and specifications for buildings to be erected, \$154,258 was paid out on interest, \$514 for printing, and we have available, after completing our program, \$75,635.

#### BUILDING NEWS

—The new Vernon Township High School at Crothersville, Ind., was dedicated on May 3. The exercises were attended by a large group of patrons, friends, and interested citizens. Senior class day exercises were held in the auditorium in the morning, and the annual commencement exercises took place in the evening.

—Rahway, N. J. The Grover Cleveland School, which accommodates pupils of the first seven grades, was opened for the first time last September. It is the third grade school to be erected in the last seven years. The building is two stories high, contains fourteen classrooms and an auditorium, and was completed at a cost of \$260,000.

—Vidor, Tey The citizans have appropriated.

—Vidor, Tex. The citizens have approved a school-bond issue of \$50,000 for a new school. Construction work will be started immediately.

—Monroe, La. A school-bond issue of \$600,000 has been approved for the erection of a high school.

—Neosho, Mo. The citizens of the school district have approved a bond issue of \$140,000 for school-building purposes. The program provides for an addition to the senior high school, an addition to one of the grade schools, and miscellaneous repairs.

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# Book News and Reviews

## Shall the State Print School Books?

The state of Mississippi being confronted with the question of providing textbooks for the schools printed under state authority, appointed a committee to make an exhaustive study of the subject. This committee, which was appointed by the Mississippi Education Association and which consisted of leading educators of the state, brought to its service every pertinent fact bearing on the subject. In brief, the study was comprehensive and conclusive.

The verdict is decidedly against the proposal that a state government can consistently or successfully engage in the publication of school textbooks. The investigators bring the question, in all its bearings, to the surface and leave no doubt in the minds of those who want the whole truth.

#### The Experiment in California

The story of California's experimentation in the schoolbook business is frankly told.

Previous to 1883, every school district in the state had the right to select its own textbooks at its own prices. A great deal of scandal developed, many charges of corruption were made, and one company in an alleged attempt to secure a monopoly on the Coast resorted to many unfair and illegal practices which resulted in its being branded as the "book trust."

In 1883 the Perry Amendment to the constitution was adopted. It provided for "a uniform series of textbooks throughout the state to be printed and published at the state printing office and sold at the cost of printing, publishing, and distributing the same.

In 1903, it was ruled that the plates of publishers might be leased. Since that time no efforts at state publication have been made.

In California no publication, but printing only of textbooks is attempted. The basal texts for the eight elementary grades are printed from plates leased from the regular publishing companies. Districts having regularly organized junior high schools are not required to use these texts in grades 7 and 8. No high-school texts are printed. The printed list includes a primer and a series of eight readers, two spellers and a manual, a series of three arithmetics, a series of three English books, two histories, a series of four geographies, a geographical reader, and a state geography, a primer of physiology, a civics, a series of eight copybooks, a series of three music readers and three manuals, a total of 42 titles.

The tendency is to get away from the system. Its disadvantages have been manifested in so many ways that no thoughtful educator any longer supports the same. The political factors still cling to the system and more especially those who hold government jobs under the same.

#### Kansas Sought to Save Money

Previous to 1913, Kansas had a law providing for state uniformity in elementary schoolbooks. It also fixed in the statute the maximum price to be paid for each book (e.g., the arithmetic should retail at not to exceed 35 cents per copy). Because of this maximum price limit, publishers could not offer their best books but found Kansas a dumping ground for obsolete and inferior books. The situation became so intolerable that a law was passed in 1913 establishing a commission to "write, select, compile, or cause to be written, or compiled, or purchased, schoolbooks, or to contract for same on a royalty basis, and to print and bind said schoolbooks and distribute

and sell them at cost." The use of supplementary books was expressly forbidden.

Publication of manuscripts by local authors was tried but abandoned as a policy by 1918. In 1923 supplementary books were legalized. The basal books are sold to pupils.

#### The Extent of State Printing and Publication

The publication of books involves the preparation, revision, and editing of their content while printing involves only the mechanical production of the books. But 2 of the 48 states attempted to print their schoolbooks, and 1 of the 9 Canadian provinces attempts to publish its schoolbooks.

Kansas now makes no attempt at the publication of its textbooks. It does, however, print the basal texts for the eight elementary grades and four books of high-school grade. These books are printed from plates leased from publishers as is the case in California. Junior high schools are not required to use the state printed books in the seventh and eighth grades.

The printed list includes 44 titles distributed as follows: a primer and a series of eight readers, a speller, a series of three arithmetics, a series of three English books, two histories, a civics, two hygienes, one agriculture, two geographies, a series of eight writing books, a writing chart, a series of six music books, history notebook, two algebras, a combined plane and solid geometry, and one high-school English book.

#### Pertinent Questions and Answers

The committee presents a series of pertinent questions and then answers them. They are as follows:

Does state printing furnish a plentiful supply of books always accessible to the pupils of the

We are forced to answer this question in the negative. California at the present time is unable to furnish a first reader, a third reader, and four copy books. They were short on geography texts for two years also. This situation is caused by the failure of the legislature to make an appropriation sufficiently large to care for all needs. These conditions have been recurrent in California for years and have at times been equally true in Kansas.

Is distribution facilitated by state printing? The answer to this question might have been in the affirmative, so far as California was concerned in 1884, as practically all of the publishing companies at that time were east of Chicago. but it does not apply now. All book companies carry stocks of textbooks in the several states and are ready to make deliveries promptly. Depositories for textbooks are provided in practically every section of the country.

Does state printing defeat the purposes of the socalled "book trust?"

There are at the present time no less than 224 companies publishing schoolbooks and materials of various kinds. Forty-four of these 224 companies do approximately 95 per cent of the ele-

A great book that comes from a great thinker-it is a ship of thought, deep-freighted with truth, with beauty too. It sails the ocean, driven by the winds of heaven, breaking the level sea of life into beauty where it goes, leaving behind it a train of sparkling loveliness, widening as the ship goes on. And what a treasure it brings to every land, scattering the seeds of truth, justice, love, and piety, to bless seeds of truth, Justice, 10.1.,
the world in ages yet to come.

—Theodore Parker.

mentary schoolbook business. Any schoolman knows that the book business is not controlled by a "trust" but that it is a highly competitive business.

Does state printing develop local authorship? The testimony of the state printers of California and Kansas gives a negative answer to this question. Each insists that the publication of texts from manuscript is unwise for a state printing plant to attempt and that it is much better to lease plates instead. The experience of each state as to the equality of the product of the local author has proved so consistently disastrous that each confines itself to selecting from the offerings of the publishing houses.

Are bookmen dangerous to the schools?

In the opinion of your committee, there is no higher type of salesman presenting wares for sale to schools in Mississippi than the "bookman." We have nothing to lose and much to gain educationally by contact with him. Much of the educational advancement of our state is due to suggestions made, and instructional material offered and explained by these representatives of book concerns. Eliminating the "bookman" from Mississippi would cause not only financial loss to the people of our state, but an educational loss to our children as well.

Is state printing an economy?

The committee here answers by saying that scientific proof is lacking, but all indications are that it is not economical. The conclusion that it is economical is usually based upon three assumptions, each of which is false:

The assumption that only one book to a subject is needed for a pupil for an entire session.

2. The assumption that the price paid for a book represents its entire cost.

3. The assumption that books, or things, called by the same name are identical and can be compared as to price without further examination.

The Committee's Conclusions state printing of elementary text-1. The books came as a natural step in California and Kansas and solved for those states some of the same problems that "state adoption" solved for Mississippi. The terms "state printing" and 'state adoption" are confused in Kansas and California.

2. The purchase, editing, and publishing of manuscripts, as textbooks in Kansas and California resulted disastrously and each state was forced to resort to the lease of plates from publishing companies.

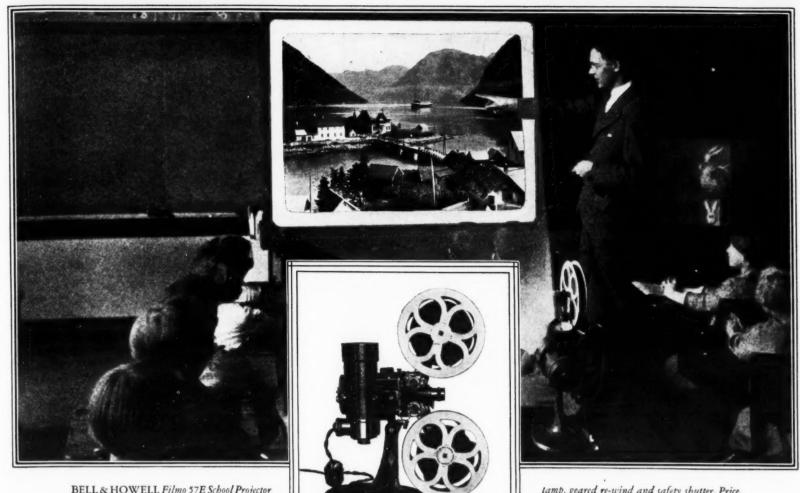
3. Due to pressure from the school people in each state there has been an improvement in content and mechanical make-up of the state printed books with a consequent material increase in cost and retail charges.

4. According to school officials in California, one of the books adopted this year has a better mechanical make-up than that same book as sold by the original publishers. The price is also higher than that of the publisher. Several other books are equal, but by far the larger number are inferior both in content and mechanical make-up to the supplemental books bought in the open market and used in these states.

The standard of the basal books printed in California and Kansas is much below in content and mechanical make-up than that which would have been in vogue in both states had the selections been unhampered by the limitations of state printing.

6. State printing in these states is not materially handicapping educational progress except in the rural districts because these states have ample financial resources to enable them to displace unsatisfactory state printed texts with more satisfactory books bought in the open market.

7. State printing was inaugurated in California and Kansas during the period of the prevalence of the four and five months' school in (Continued on Page 157)



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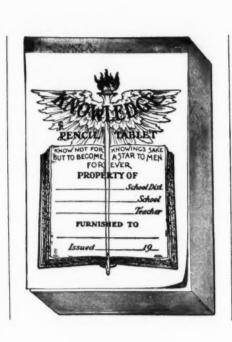


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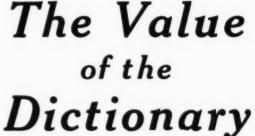
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- 3. Home life is the central thought of the early pages of the Primer.
- 4. Extremely rich response material on various levels of difficulty to take care of individual pupil differ-
- 5. Decorative end sheets serve as a key to practically every noun in the Primer-a child's dictionary.

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(Continued from Page 154) those states and has promoted none of their present development. It is a carry-over from the period of one-teacher schools, of split-log seats, one-reader-per-session, and district adoption. Just as some other states cling to other obsolete educational fetishes, so are Kansas and California still attempting to print a part of their own books. Each is tending away from it, however, and the day is probably not far distant when this plan will be abandoned. To inaugurate the state printing of textbooks now is not a progressive measure for any state, but is distinctly retro-gressive as it applies to the educational development of children.

8. The attitude of the school people of Kansas and California toward state printing of schoolbooks is one of apologetic defense, and, were it not for their financial ability and for legal means provided for the purchase of supplementary looks to take the place of unsatisfactory state printed books, they would have abandoned the plan long ago

Opinion of Educators
Dr. Ellwood P. Cubberly, the well-known California educator, says: "One often wonders how long the people of California, Kansas, or any other state will continue building schoolhouses as architects direct, and equipping them with all needed teaching devices; employing teachers who have been trained at public expense; and selected with care; paying good salaries to superintendents of schools to direct the education of youth and efficiently manage the schools; and then continue to ignore all expert advice as to teaching tools, and allow politicians to determine plans for textbooks that affect the education of millions of children-all because they promise a little pecuniary saving-when the prime question is not cost, but quality, and teaching.

"The whole question of costs as brought out by the political adventurers in this field is deceptive. They can show you with a pencil that the state printing office at Sacramento can produce the state textbooks for, let us say, 80 per cent of the retail costs of the same books bought from the publisher. If we neglect all overhead and developmental costs, which is always done, this probably is about the right figure. The books, however, are not so well printed and bound, and hence do not last so long.

"Twenty to 25 years ago the books were wretchedly printed and bound, but the long criticism of school people has led to an improvement of manufacture, so that now they are fairly satisfactory in this respect. I think, however, that they are still inferior in paper, presswork, and binding to the equivalent books issued by the publishers.

"Replying to your second question as to economic saving. We have no such study, and can't get one. The figures we have from the state office as to costs include paper, presswork, and binding, and author's royalty only. The whole overhead and miscellaneous costs together with the million dollars of developmental costs are never included.

'All schools are expected to use the state books and, of course, do so. Some use them as the main texts, others only as basal, and supplement the state texts with other books, Still other schools in some subjects provide a good supply of supplementary texts and the state book is used only as a guide and syllabus. To what extent these practices are followed is almost impossible to find out, in part for the reason that the schools, nominally at least, comply with the legal requirements to use the state books, and are not at all anxious to let anyone know how little they use

#### BOOK REVIEWS

Present Status of Business Executives in **Public Schools** 

By Amos Leonard Heer, Ph.D. Paper cover, 170 ages. Published by Kent State Normal College, Kent, Ohio.

This book presents a comprehensive study on the business side of school administration. It brings out the fact that there has been a decided advance in finding the adjustments between the business and professional factors of a school system. Many of the involved relationships have been clarified and set forth with definiteness as to plan and

The author opens his discussion by pointing out the basic principles in industrial organization. He brings to his service the best authorities in this field. One of these defines management as follows: field. One of these defines management as follows: "Under the general term, management, all activities are included incident to initiating an enterprise; financing it; establishing the major policies; providing the necessary equipment and personnel; organizing the enterprise so that all of its parts will function properly; and directing or administering it after it is in operation."

Having devoted a chapter to the fundamentals of organization, the fixing of responsibility, and the scope and function of the several factors, as applied to the world of commerce, the author steps over into the school field.

into the school field.

Here he deals with the evolution of the business administration of the public schools. Old-time con-ceptions are recited and the newer methods are escribed. The old implied direct attention by school ommittees. The new shows a delegation of au-

committees. The new shows a delegation of authority to experts.

A whole chapter is devoted to the legal status of business executives. The author holds that school codes recognize three types of administrative relationships. He describes them as follows:

"In actual practice, there are three types of administrative relationships existing between business executives and the superintendent of schools and the board of education: (1) The superintendent of schools is the chief executive officer of the board and all other employees are subordinate to him. (2) The board has two or more executives who are coordinate and one of whom is the superintendent (2) The board has two or more executives who are coordinate and one of whom is the superintendent of schools. (3) The business executive is responsible in part to the superintendent of schools and in part to the board of education. No provision is made in the law for the third type of relationship in its pure form. In actual practice, however, it is very featured by found?" quently found."

In nine states specific mention of a business manager is made although this title is not always used. These states are Illinois, Indiana, Kentucky, Michigan, New York, New Jersey, Ohio, Pennsyl-

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vania, and Washington. The author adds: "While many of the school laws make neither specific mention of the boards' authority to appoint business executives or imply that power, yet boards of education assume such authority. It is a principle generally accepted that boards of education may employ such officers and persons as in their judgment are necessary for the efficient management of the schools."

The practice of delegating school-board functions

ment are necessary for the efficient management of the schools."

The practice of delegating school-board functions to agencies outside of that body is not supported. It is held that: "The practice of placing some of the business functions in the hands of city officials is of doubtful value. There is a division of authority and control without a coordinating agent which is likely to lead to inefficiency. Any city of 25,000 inhabitants has enough business functions in its public schools to employ at least one business executive. If this executive needs assistance, such assistance as may be needed should be supplied by the board of education."

The book then shows a series of diagrams which outline plans of organization. Here it is found that while some of the school systems select the superintendent as the connecting link between the board of education and the several departments, both business and professional, many more do not. In most instances the authority which emanates from the board of education is divided between the business and the professional.

Thus, it is found that the business manager heads one division of the plan of executives with the several division of the plan of executives with the several division of the plan of executives with the several departments.

ness and the professional.

Thus, it is found that the business manager heads one division of the plan of organization while the superintendent heads the other. They are coordinate officials, each directly responsible to the board of education. There are, however, so-called multiple types of organization in which the several factors, as for instance the attorney, superintendent of buildings, superintendent of schools, business director, librarian, and secretary are all directly responsible to the board.

The business executives serving in school systems

The business executives serving in school systems are known under many designations. While the title of "business manager" is most frequently used it is also found that in many instances the title of "secretary" or "clerk" or that of "purchasing agent" is employed. There are inspectors of school grounds, chief janitors, auditors, custodians of buildings and grounds, etc., etc. In fact the list of business executive is covered by fifty-odd titles.

In summarizing the principles governing school administration the author stresses the following:

1. Center control in a single executive who is responsible to a board of directors:

Establish definite lines for the flow of au-

thority.

3. Delegate responsibility and authority.

4. Provide each individual with a definite statement of his duties.

5. Keep accurate records of all data needed for many policies and for guiding operations.

5. Keep accurate records of all data needed for formulating policies and for guiding operations.

He also says: "The evidence compels the recommendation of the unit-chief-executive type of organization with the superintendent of schools as the chief executive officer."

"For cities with a population of 25,000 to 75,000 inhabitants, a combination of the work of the secretary and the assistant superintendent in charge of business affairs may be desirable. By combining these two functions it is probable that a higher type of executive would be employed than would otherwise be secured. Yet it is possible that in a rapidly growing city of this size, the functions would be numerous enough to keep the two departments separated. The departments should combine only when the duties are not sufficiently great to warrant the employment of both a capable secretary and a capable assistant superintendent of schools in charge of business affairs."

in charge of business affairs."
The bibliography mentions 28 periodical articles,
22 of which are credited to the School Воакр

Cost of Living of Teachers in the State of New York
By David P. Harry. Cloth, 184 pages. Price, \$1.75. Bureau of Publications, Teachers College, Columbia University, New York City.
This study is intended to ascertain the variations in the cost of living of teachers in certain communities of New York State. It suggests a type of study which might be profitably undertaken in every state in the Union as the basis for adjusting teachers' salaries to teachers' living needs. It suggests a very interesting method for computing state aid on the basis of special allowance to be made to individual communities due to the cost of living. of living.

Modern Life Arithmetics
By John G. Fowlkes and Thomas T. Goff. Book four, 254 pages; Book five, 272 pages; Book six, 276 pages. The Macmillan Company, New York City.

These books are addressed respectively to the sixth, seventh, and eighth grades. The underlying

theory and the methods worked out in the earlier volumes are developed very fully in these three upper-grade books. The final book contains an exceptional amount of abstract practice, in the belief that it will be the last opportunity to be enjoyed by these children for formal arithmetical work. Some work in positive and negative numbers is provided as a means of bridging the gap with algebra. Not the least important feature of each of the books is the reviews intended to help pupils find their own weaknesses and to apply remedial drill. drill.

#### Modern Algebra

A first course. By Raleigh Schorling and John R. Clark. Cloth, 400 pages. The World Book Company, Yonkers, N. Y.

This book represents two semesters' work for the This book represents two semesters' work for the ninth grade, and is the embodiment of the newer movement in mathematics teaching, which emphasizes psychological and pedagogical principle as basic and of equal importance, etc., interest in the presentation of each topic, in the form and material of concrete problems, and in the constant challenge to the pupil's ability to solve the problems and to discover underlying principles.

The book is so arranged that it will serve as a basic course for pupils of limited ability and will, at the same time, provide a rather rich amount of problems and exercises for the student who is preparing for college. Frequent use is made of reviews and tests intended to lead the student to recognize his own shortcomings and to overcome them. A few standardized tests are included.

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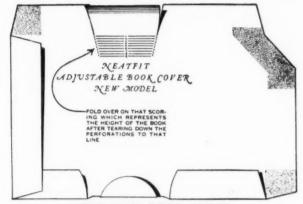
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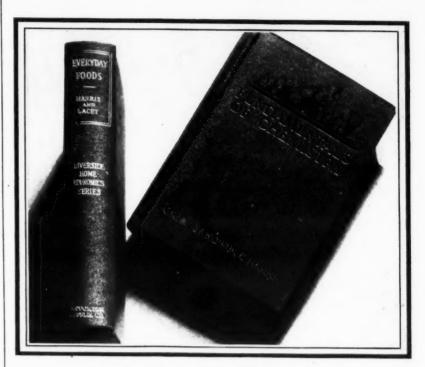
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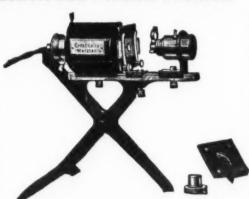
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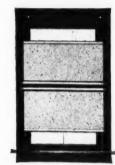
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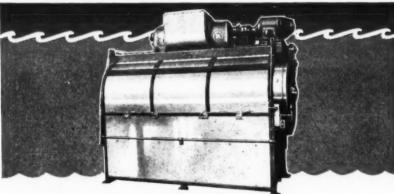
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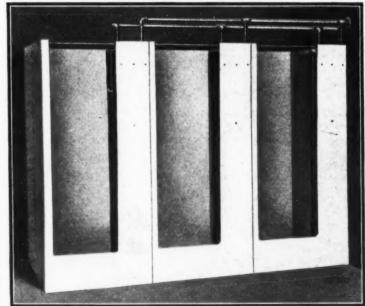
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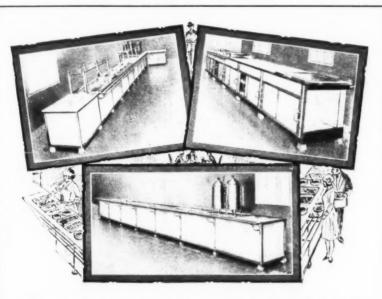
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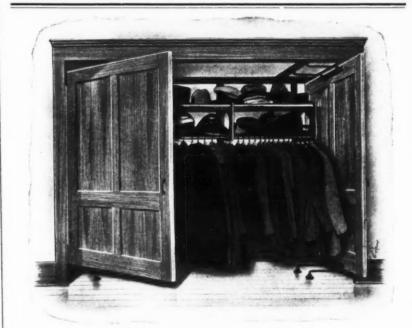
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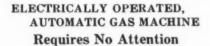


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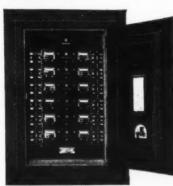
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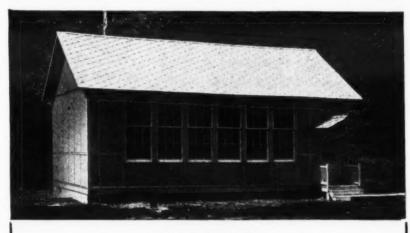
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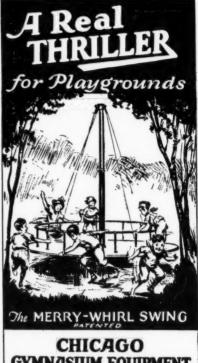
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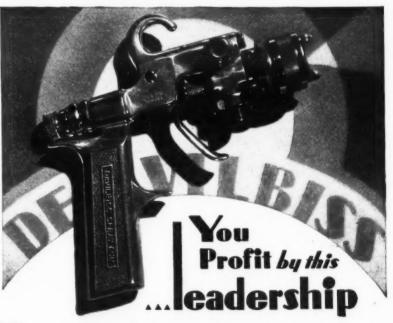


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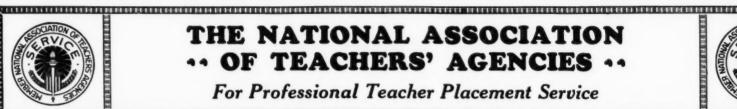
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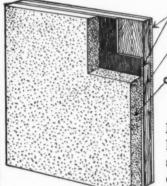
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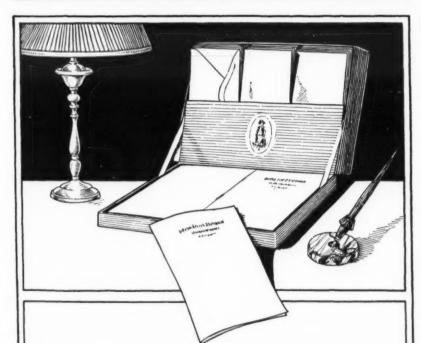
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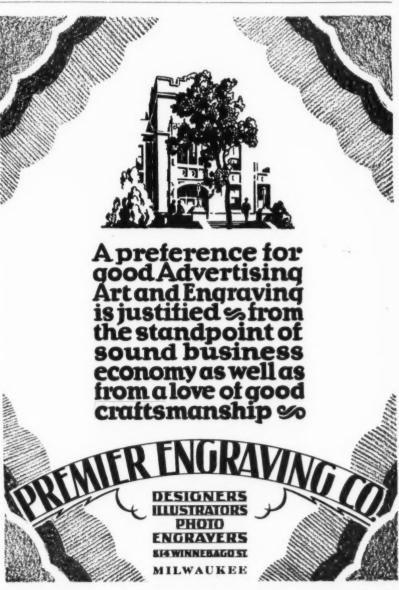
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A copy of the catalog will be mailed to any school official or architect upon request.

CAST BRONZE SCHOOL TABLETS

The Newman Manufacturing Company of Cincinnati, Ohio, has issued a four-page illustrated folder, describing a variety of cast-bronze tablets for educational, memorial, and patriotic purposes.

The firm has specialized in the design of bronze school tablets for the past 47 years and its selected staff of artists and craftsmen and its experience have made it possible to produce school tablets of high artistic quality and endurance.

Complete information and prices of these tablets may be obtained by writing to the Newman Mfg. Company at Cincinnati, Ohio.

NEW SENGBUSCH ADJUSTABLE

Company at Cincinnati, Ohio.

NEW SENGBUSCH ADJUSTABLE INKSTAND

The Sengbusch Self-Closing Inkstand Company of Milwaukee, Wis., has issued a new illustrated circular describing the new Sengbusch swivel, adjustable inkstand for school and general purposes.

The Sengbusch inkstands meet the urgent need for desk sets of refreshing newness. Their beauty of design, attractiveness, and selling appeal are evident to all, and their practical utility will be noted by school administrative officials.



NEW SENGBUSCH EXECUTIVE INKSTAND

The stands are available in some three hundred combinations, including onyx, marble, emeraline and black glass bases, ornamented with the latest Sengbusch all hard-rubber self-closing inkstand and adjustable socket strike. The new "dipada" pens used in connection with the inkstand are simple and practical in use and are adapted for desk work. The pens come in color combinations of dainty pastel shades of standard colors which appeal to discriminating schoolmen in administrative positions. They are fitted with the highest quality 14-K gold iridium-point pens and are constructed to permit the use of any standard brand of ink.

Complete information and prices of the new Sengbusch inkstand and pen may be obtained from the Sengbusch Company at Milwaukee, Wis.

NEW HOLOPHANE LIGHTING UNITS The stands are available in some three hundred

NEW HOLOPHANE LIGHTING UNITS

The Holophane Company of New York City has announced its new booklet No. 900, describing and illustrating a new, extensive line of Holophane ornamental luminaires. The designs are grouped according to periods and are suited for use in school and public buildings.

The firm offers to supply drawings and details for transfer to architects and school authorities who request them for use in connection with the

who request them for use in connection with the installation of lighting systems in schools.

Complete information and prices may be obtained upon request to the Holophane Company, 342 Madison Ave., New York City.

NEW LINE OF STANDARD TABLET-ARM CHAIRS

The Standard School Equipment Company of Siler City, N. C., has just placed on the market a new Superior tablet-arm chair and a posture tablet-arm

chair for use in school recitation rooms and lecture rooms. Both chairs are constructed in plain and quartered oak and are built according to correct seating principles, embodying in an increased meas-nre, the features and principles of comfort, durability, and beauty of design which have been incor-porated in previous designs.

The No. 399 chair has an inclined tablet arm, low

enough at the front to prevent stooping and to



NEW NO. 399 STANDARD TABLET ARM CHAIR

afford correct posture while writing. It has a shallow seat, at a proper height from the floor, with deep saddle of improved design, and adequate spacing of stretchers which prevents books from sliding out when the chair is tipped.

The No. 93 posture tablet-arm chair has a shallow seat, a wide back slat for the backrest, and is so constructed that the arms and shoulders are unimpeded, while the tablet arm takes up very little



NEW NO. 93 POSTURE TABLET ARM CHAIR

space in the room. Double spiral dowel construction is used throughout and all edges are rounded.

School authorities may obtain complete informa-

tion and prices concerning these new tablet-arm chairs by addressing an inquiry to the Standard School Equipment Company at Siler City, N. C.

NEW STEDMAN DESK TOP SOLVES DESK PROBLEM

The Stedman Products Company of South Braintree, Mass., manufacturers of the Stedman reinforced rubber-tile flooring material, have devised a new method of reconditioning school-desk tops which have been marred and scratched by hard usage and abuse. The desk top problem has been solved by the application of a reinforced rubber desk top, which has been found to provide a fine writing surface, and which has the advantages of anti-glare, extreme durability, and remarkable ease anti-glare, extreme durability, and remarkable ease in attaching to old desks. The desks tops may be obtained in standard sizes

The desks tops may be obtained in standard sizes and are equipped with an opening for the inkwell and a groove for the pen and pencil. Their extreme smoothness, together with the double writing surface, and density of structure, make them superior even to the ordinary wood top. The anti-glare feature is very important as it materially reduces eye fatigue. The desk tops will not reflect light rays even under the brightest illumination. The tops may be obtained in a variety of colors, but the Verde Antique has been found most satisfactory, because its base is black, with cream and sea green for veinings. The desk tops are simply and rapidly installed, so that an entire classroom can be equipped with a few hours' time.

Complete information and prices of the Stedman desk tops may be obtained upon request by any school official or school purchasing agent.

NEW FLOOR MATERIAL FOR CHECKING DISINTEGRATION

The Master Builders Company of Cleveland, Ohio, with the aid of their chemists, have completed a study of various types of treatments for hardening concrete floors. The study has resulted in the

production of a new ingredient, called the Fifth Ingredient which, when added to Portland cement, produces new and permanent combinations with the soluble elements, and effects important beneficial changes in the colloidal structure.

The new material, called Omicron, not only makes the count structure more highly resistant to the

the new material, cance to micron, not only makes the cement structure more highly resistant to the dissolving action of acid and alkali solutions, but likewise produces important increases in compressive and tensile strength. Omicron greatly increases the permanance of concrete in various types of service, and its resistance to severe corrosive conditions has been fully demonstrated.

tions has been fully demonstrated.

A copy of The Fifth Ingredient, containing the results of the study, will be sent gratis to any school official or architect who will write to the Master Builders at 7016 Euclid Ave., Cleveland,

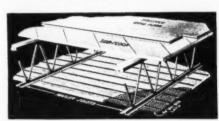
NEW STEEL NAILER JOIST

The Truscon Steel Company of Youngstown, Ohio, has announced the marketing of a new product permitting the use of wood floors in school buildings, and allowing for rigidity and noiselessness in steel joists.

The new device is a steel of the steel of the

steel joists.

The new device is a steel joist, with a wood nailing screen embedded in the top members, to which rough wood flooring is nailed directly. Formerly, when steel joists were used, it was necessary to lay a slab of concrete over the joists, with the wood flooring placed over the concrete. The nailer joist greatly reduces the construction cost through the comments slab. the elimination of the concrete slab.



SECTIONAL VIEW OF TRUSCON STEEL NAILER JOIST

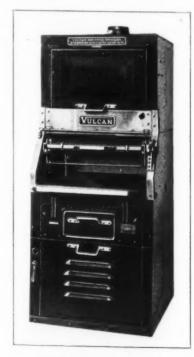
The nailer joist is of simple design, and consists of two main steel members, joined by a continuous web member formed by a Warren truss, which gives great strength and rigidity, combined with light weight and low manufacturing cost, its use reduces the fire hazard in schools to a minimum.

The Truscon Company offers to send a book describing the nailer steel joist to any school official or architect who requests it.

NEW VULCAN BROILER

A new piece of Vulcan cooking apparatus has made its appearance recently and is meeting with a very cordial reception from cafeteria cooks.

The Vulcan radiant surface broiler which has been on trial in the company's laboratories for



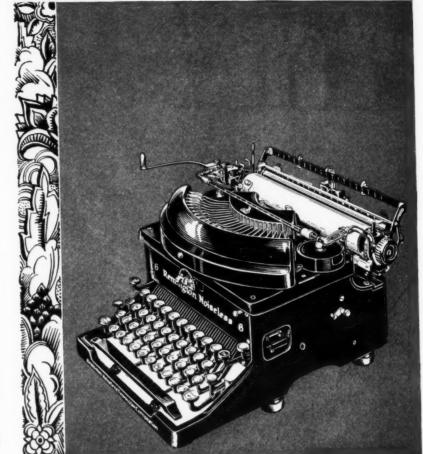
NEW VULCAN BROILER

more than two years, and in some of the best hotels for more than a year has withstood the most severe tests. It is designed to produce better broiled foods with greater economy of gas.

The gas is forced through a porous alundum slab which it quickly brings to incandescence, thus producing a radiant bed of firelike charcoal. It projects a heat of 1,300 degrees downward instead of only 750 degrees, most of which rises from some of the ordinary burners. the ordinary burners.



# schools should equip with ---



# REMINGTON NOISELESS

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CCHOOLS are training grounds for business. Whenever business universally adopts a product as superior to others of its kind, schools must adopt it and teach its use or their equipment becomes antiquated.

The Remington Noiseless marks a new era in typewriters. The business world has been quick to see its advantages of silent effortless action. In New York's financial district alone 28,000 Noiseless Typewriters are in use. Eventually Remington Noiseless will replace all other typewriters.

Is your school in step with the trend of the times? If not, call your local Remington Rand man. He'll demonstrate this quick, quiet machine without obligation at your convenience. Call on him today!







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An Egotistical Confession
Mr. C. H. Freeman, Ohio Northern University,
Ada, Ohio, who is in charge of the English department there, is well known throughout the middle
west as a speaker of no little prominence. Naturally,
he has a wide accuratory of the confession of the confession

west as a speaker of no little prominence. Naturally, he has a wide acquaintance, especially so among the young folk. He tells the following story and vouches for its truth.

A young fellow was a fairly good student in the college and especially good, as they say in the cultivated section of the east, in throwing superheated air. Professor Freeman saw him several years after he had graduated from college and asked him how he was getting along. The young fellow with all the blase spirit of youth, thumbs in his vest, replied, "Fine, fine, I am the best lawyer in southeastern Ohio, I admit it."

How often do we find students in their own schools and often teachers so conceited that they are missing the big and better things in education. The only thing that can be said about them is, what they are thunders so loud in our ears we cannot hear what they say they are.

A New Brand of Cooperation

A New Brand of Cooperation Mr. W. G. Wolfe A New Brand of Cooperation
Mr. W. G. Wolfe, county superintendent of schools, Cambridge, Ohio, has a rather far-flung rural county. In it are hills and valleys. In one of his trips across the county he happened to notice several cows in the shade of a tree. Half of the cows had their heads to the east and the other half had their heads to the west. By this method they kept the flies from their heads. Mr. Wolfe remarked about this rather unusual arrangement to one of the members of the local school board, who was a farmer.

to one of the members of the local school board, who was a farmer.

The farmer said, "Naw, that ain't nothin' new; they do that all time during the summer." Then he said with a twinkle in his eye, "I guess that is what you might call 'cow operation.'"

Mr. Wolfe uses this story in speaking at school gatherings to show teachers that even dumb animals believe in cooperation. How much more should teachers, school officials and parents cooperate in order to further educational opportunities to the boys and girls? boys and girls?

The Juvenile Viewpoint

The Juvenile Viewpoint

Mr. T. W. Gosling, superintendent of Akron, Ohio, schools, is always able to see the pupil's viewpoint. He realizes that the pupil has a right to his views and he should be given proper recognition and direction. Last fall when the weather was so extremely hot, school was dismissed for several half days. Naturally, the pupils were overjoyed with this emergency vacation. Mr. Gosling happened to be following a group of young boys one day and overheard one youngster remark, "Golly, I hope the whole world will burn up so much that we won't have to have any school." Mr. Gosling smiled and said not a word. We just

imagine that when this youngster gets older he will not want the world to burn up, if he is still going to school in Akron, because he will learn that schooling is a very enjoyable part of a man's life.

Asking a Lot

Education is largely dependent upon the selfactivity of the individual, and the teacher, although
he can do much, is nearly helpless unless the pupil
himself has the ability and the will to learn.
Apropos of this point, Dean E. A. Fitzpatrick of
the Graduate School of Marquette University, is
fixed of talling this story: the Graduate School of Marquette University, is fond of telling this story:

"Doctor, how long will this anesthetic keep me unconscious?" asked a woman patient.

"Not very long," said the doctor.

"But, how long will it be before I know anything," insisted the woman.

"I'm afraid," answered the doctor, "that you are asking a great deal of an anesthetic."

No Wonder!

A Kentucky mountaineer took inventory of his numerous progeny one fall and discovered that his youngest boy, Ezekiel, had more than reached the legal school age. He had to call in all the neighbors to help run Zeke down; and when they had got some pants and store shoes on him, he was dragged off to the little red school house and turned over to the first-grade school teacher.

"Does he know the A-B-C-'s?" the teacher inquired.

quired.
"H --1, no," Zeke snorted disgustedly. "Ah only bin heah five minutes!"

One for Euclid
"How old are you?" a school teacher inquired

"How old are you?" a school teacher inquired of a new pupil.

"I don't know," was the serious reply. "Mother was twenty-six when I was born, but now she's only twenty-four."

He Remembered

The absent-minded professor suddenly remembered. He looked at his watch. It said two o'clock. "Gosh," he said, snapping his fingers; "I just remembered that I have a class at two o'clock to deliver a lecture to. It's two now, so I'd better hurry." So he put on his hat and left the lecture hall.—Brown Owl.

The Very Latest Excuse

The Very Latest Excuse "Robert, why are you so late this morning?"

Robert (breathlessly): "If you please, teacher, dad tuned in a western station last night and set our clock by it."

The Very Best

The young lady was very gushing about her love of books. The professor of literature of whom she was speaking, however, was rather skeptical as to the extent of her knowledge. "Of course you know Sir Walter Scott's works?" he gently inquired. "I do: I do!" she cried ecstatically. "His 'Lady of the Lake,' most wondrous of books, you have read that?"

"Yes, indeed," was the eager response; "I simply adore it."

"And Scott's 'Marmion,' and "Kenilworth,' and 'Peveril of the Peak'?" he continued.

"Yes, yes," she joyfully avowed.

"Scott's Emulsion,' too?" he inquired, enthu-

she cried, "is the very best he ever "That. Kablegram.



Teacher: "Your essay is very good, but it's the same as Johnson's. What shall I conclude from that

Pupil: "That Johnson's is very good, too."-Punch.

PUBLICATIONS RECEIVED
Sources of Supply of Commodities Covered
by U. S. Government Master Specifications.
Published by the Bureau of Standards, U. S.
Department of Commerce, Washington, D. C. Contains a list of manufacturers desirous of supplying material in accordance with certain U. S.
Government Master Specifications promulgated by
the Federal Specifications Board. The material to
be supplied complies with the requirements and
tests of these specifications and is guaranteed by
the manufacturers. the manufacturers.

Construction Costs During the Period 1910-1928. Paper, 61 pages. Published by the Engineer-ing News-Record, New York City. The pamphlet takes up construction volume and cost, material prices, and unit prices on 77 typical jobs in 1928.

Recent Economic Changes in the United States. Paper, 32 pages. Price, five cents. Prepared under the direction of the U. S. Department of Commerce, and issued by the Government Printing Office, Washington, D. C. The booklet represents a report of the committee on recent economic changes of the president's conference on unemployment. The survey included a critical appraisal of the factors of stability and instability, and endeavored to note the American economy as a whole, suggesting rather than developing recommendations. The national butter than developing recommendations.

than developing recommendations. The national bureau was responsible for the basic survey, while the committee had charge of the work of interpreting the facts set out in the report. The report covers speed in modern production, mass services, remote saturation points, economic balance, unemployment, and periodic surveys and appraisals.

Financial Statistics of Cities Having a Population of Over 30,000. Paper, 23 pages. Issued by the Government Printing Office, Washington, D. C. A report of the financial statistics of 250 cities for the year 1927, covering tax levies, revenues, cost payments, indebtedness, and assessed valuation of property. According to the report, the total amount spent for expenses of operation and maintenance of all general departments was \$1,750,707. Of this, \$668,263, or 15.65 per cent, were spent for education.

of all general departments was \$1,750,707. Of this, \$668,263, or 15.65 per cent, were spent for education.

Code of Minimum Requirements for the Heating and Ventilation of Buildings. Published by the American Society of Heating and Ventilating Engineers, New York City. The present booklet has been prepared in response to a demand for fundamental formula and methods to be employed in the design of heating and ventilating installations and the application of various equipment. The information given represents the minimum requirements as called for by good practice at the present time and the application of formula, diagrams, and tables are illustrated by examples to explain the application. Some of the topics covered in the pamphlet are minimum ventilation requirements, minimum requirements for the determination of the amount of direct-steam and hot water radiating surface to be installed, minimum capacity and installation requirements for low pressure steam and hot water heating boilers, minimum requirements for the installation of air washers and filters, and standard symbols for heating and ventilating drawing. The code consists of twelve sections and two appendices and will be enlarged and revised from time to time.

The Walsh-Preston True-False Tests. Price, 50 cents. Published by Walsh & Preston, Caldwell, Idaho. These sheets constitute an inexpensive device for correcting true-false test papers. The teacher who desires to use them is enabled to punch out little squares provided and thus check the results of her students' work by simply placing the sheets on the students' test papers. Complete directions are provided for compiling results with a minimum of effort and time.

List of Inspected Electrical Appliances (April, 1929.) Paper, 199 pages, Issued by the National Board of Fire Underwriters, Chicago, Ill. A list of appliances inspected for accident hazard, fire protection, and miscellaneous appliances.

Board of Fire Underwriters, Chicago, Ill. A list of appliances inspected for accident hazard, fire protection, and miscellaneous appliances.

Salaries and Legal Provisions Relating to the County School Superintendency in the United States. By Katherine M. Cook. Paper, 22 pages. Price, five cents. Issued by the Bureau of Education of the U. S. Department of the Interior. This is a report devoted chiefly to the salaries of county and other rural school superintendents. It presents information concerning the selection, term, qualifications, and experience of these officials. The report discusses the influence of the method of selection, the influence of educational requirements, and the influence of salary. The data on salaries shows that there is a wide differential in favor of city superintendents, and that the median salaries are decidedly in favor of cities, a situation which results in limiting the probable number of candidates. decidedly in favor of cities, a situation which results in limiting the probable number of candidates.

Poetical Sympathy
A son at college wrote to his father:
"No mon, no fun, your son."

The father answered:
"How sad, too bad, your dad."—American Boy.

Check Writers

Key Set Decimal Tabulators

Wide Carriage Models from

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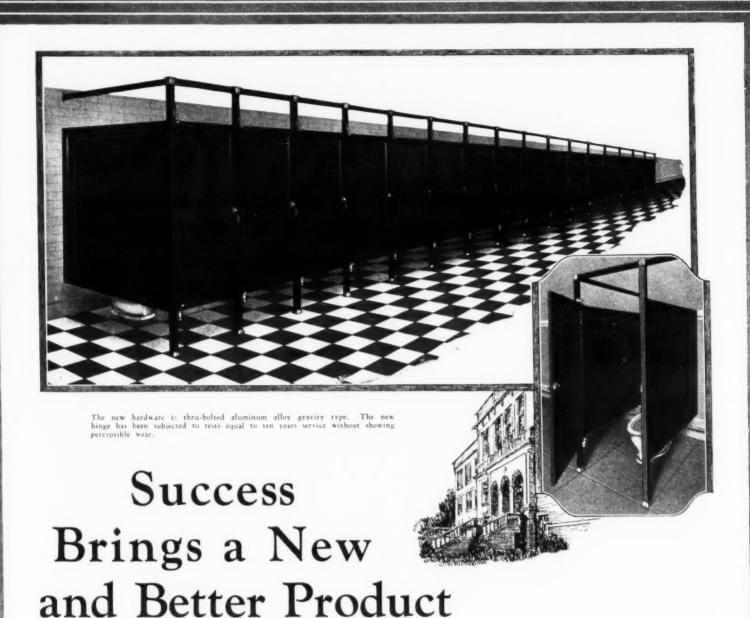
In the Commercial centers—in the cities and far-off corners of the earth—in the schools of every nation—in fact, wherever human thoughts and deeds are recorded, there you will find the UNDERWOOD, the Standard of Typewriter Efficiency.

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Standard and Portable Typewriters and Bookkeeping Machines UNDERWOOD TYPEWRITER COMPANY

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Contrary to popular opinion it is success, not failure, that promotes improvements. Success is a going concern. Failure is—just that! The well known Mills Metal toilet partition was a substantial success. Sales volume increased every year. And right in the midst of this success we supersede it with a new and vastly improved

New design, new construction, new hardware. Note beautiful harmony in panel and door mouldings pleasingly relieved by  $2\frac{1}{2}$ " stile 3/16" deep. This stile is re-enforced at each corner, solidly welded across the mitre, ground down and filled—then you have beauty and strength beyond anything ever offered in this field.

product.

Furnished standard with prime coat for finishing on the job or finished at the factory in green or gray baked enamel. Write for further information.

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INTERCHANGEABLE PARTITIONS

#### Mills Internal Shoe

is retained on the improved toilet partition because the many years it has been used are abundantly rich in evidence that with the shoe inside the post there can be no lodging places for accumulation or moisture.

# A paper towel must be absorbent . . . and it must stand the gaff

Tests show how new development can save 10% and up on your towel bills

ONLIWON PAPER TOWEL ONLIWON PAPER TOWEL ONLIWON PAPER TOWEL

WET hands break through ordinary paper towels at once: the user takes from two to half-dozen to do the job. The problem has been combining the two essential qualities, strength and absorbency.

## Now-a balanced formula

Today A.P.W. offers all users of towels a remarkable development. We ask you to test either the new Onliwon Kraft Towel or Onliwon Unbleached Towels in your own washroom. The long fibres of this remarkable paper are scientifically "laid" to give tensile strength *during actual use*. Without breaking, one Onliwon Towel wipes the hands *dry* 

Onliwon Towels are made double-folded. The economy of this added drying power has been demonstrated in thousands of institutions for years.

## Savings in every field

Facts and figures are the proof. "The Onliwon System has saved at the rate of 80% over cloth towels," writes the President of the Professional Building Corporation of Richmond, Va. In one year with this service, a large office building saved over \$1000. A great automobile manufacturer uses Onliwon Towels at a cost of 14c per man per month. Let us send you actual comparisons.

You are buying towels—not cases

A case of Onliwon Towels contains up to 34%



TOILET PAPER AND PAPER TOWEL SERVICE



Onliwon towel cabinet, solid white porcelain. Can also be supplied with nickel silver door.

more drying surface than other brands. It weighs from two to seven pounds more. Dispensed one at a time, in standard Onliwon Cabinets, these remarkable paper towels will keep your towel costs to an absolute minimum.

## Read the experience of others

Leading industrial organizations, hotels, hospitals, schools and public buildings are enthusiastic about the economy Onliwon Towel Service has meant for them. Just mail the attached coupon and we will send you full data.

#### Just Mail This Coupon Now

A. P. W. PAPER CO., Albany, N. Y. We are interested in the story of Onliwon Towels. Without obligation to us, send us further data.

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## STANDARD SCHOOL EQUIPMENT

Schools at Worcester, Mass.

Equipped With AUSTRAL WINDOWS



Thorndyke Road School, Frost, Chamberlin and Edwards, Architects.



Granite Street School, Edward P. Fitzgerald, Architect.



Bloomingdale Road School, Jasper Rustigan, Architect.



Ventilation Without Draft



May Street School, Cutting, Carleton and Cutting, Architects.



Nelson Place School, Jasper Rustigan, Architect.



Showing a group of AUSTRAL WINDOWS installed in a Kindergarter at the Thorndyke Road School. Although these windows appear to be closed, they are, as a matter of fact, open from 10 to 12 inches at the center, deflecting the incoming air up into the center of the room giving perfect ventilation with no danger of draft.

The architects and officials of these Worcester Schools and the citizens of that city may well take pride in their modern School construction and equipment.

PARKAVE AUSTRALWINDOW O. PEWYORK